

The copyright © of this thesis belongs to its rightful author and/or other copyright owner. Copies can be accessed and downloaded for non-commercial or learning purposes without any charge and permission. The thesis cannot be reproduced or quoted as a whole without the permission from its rightful owner. No alteration or changes in format is allowed without permission from its rightful owner.



**MEDIATING ROLE OF INTERNALIZING AND
EXTERNALIZING BEHAVIORS BETWEEN
TEMPERAMENTAL EFFORTFUL CONTROL AND ACADEMIC
PERFORMANCE: EVIDENCE FROM PAKISTAN**



ALISHBA HANIA

**DOCTOR OF PHILOSOPHY
UNIVERSITI UTARA MALAYSIA
2019**



Awang Had Salleh
Graduate School
of Arts And Sciences

Universiti Utara Malaysia

PERAKUAN KERJA TESIS / DISERTASI
(Certification of thesis / dissertation)

Kami, yang bertandatangan, memperakukan bahawa
(We, the undersigned, certify that)

ALISHBA HANIA

calon untuk Ijazah
(candidate for the degree of)

PhD

telah mengemukakan tesis / disertasi yang bertajuk:
(has presented his/her thesis / dissertation of the following title):

**"MEDIATING ROLE OF INTERNALIZING AND EXTERNALIZING BEHAVIORS BETWEEN
TEMPERAMENTAL EFFORTFUL CONTROL AND ACADEMIC PERFORMANCE:
EVIDENCE FROM PAKISTAN"**

seperti yang tercatat di muka surat tajuk dan kulit tesis / disertasi.
(as it appears on the title page and front cover of the thesis / dissertation).

Bahawa tesis/disertasi tersebut boleh diterima dari segi bentuk serta kandungan dan meliputi bidang ilmu dengan memuaskan, sebagaimana yang ditunjukkan oleh calon dalam ujian lisan yang diadakan pada : **25 Julai 2019.**

That the said thesis/dissertation is acceptable in form and content and displays a satisfactory knowledge of the field of study as demonstrated by the candidate through an oral examination held on:

July 25, 2019.

Pengerusi Viva:
(Chairman for VIVA)

Prof. Dr. Yahaya Mahamood

Tandatangan
(Signature)

Pemeriksa Luar:
(External Examiner)

Prof. Dr. Nik Ahmad Hisham Ismail

Tandatangan
(Signature)

Pemeriksa Dalam:
(Internal Examiner)

Dr. Nabisah Ibrahim

Tandatangan
(Signature)

Nama Penyelia/Penyelia-penyelia:
(Name of Supervisor/Supervisors)

Dr. Azlizamani Zubir @ Salim

Tandatangan
(Signature)

Nama Penyelia/Penyelia-penyelia:
(Name of Supervisor/Supervisors)

Dr. Daisy Jane C Orcullo

Tandatangan
(Signature)

Tarikh:

(Date) **July 25, 2019**

DR. AZLIZAMANI ZUBIR @ SALIM

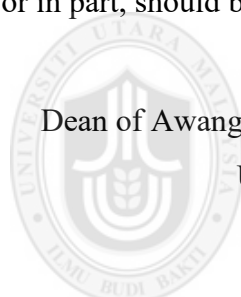
Pensyarah Kanan

Pusat Pengajian Psikologi, Gunaan,
Dasar dan Kerja Sosial
CAS, Universiti Utara Malaysia

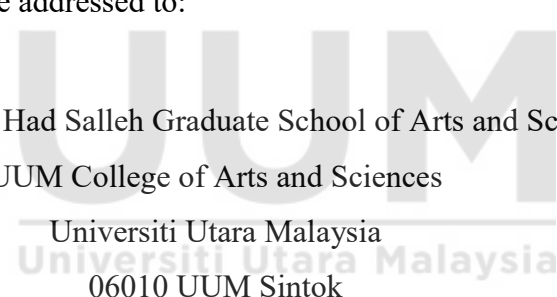
Permission to Use

In presenting this thesis in fulfilment of the requirements for a postgraduate degree from Universiti Utara Malaysia, I agree that the University Library may make it freely available for inspection. I further agree that permission for the copying of this thesis in any manner, in whole or in part, for scholarly purpose may be granted by my supervisor(s) or, in their absence, by the Dean of Awang Had Salleh Graduate School of Arts and Sciences. It is understood that any copying or publication or use of this thesis or parts thereof for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to Universiti Utara Malaysia for any scholarly use which may be made of any material from my thesis.

Requests for permission to copy or to make other use of materials in this thesis, in whole or in part, should be addressed to:



Dean of Awang Had Salleh Graduate School of Arts and Sciences
UUM College of Arts and Sciences
Universiti Utara Malaysia
06010 UUM Sintok



Abstrak

Prestasi pelajar dipengaruhi oleh pelbagai faktor yang penting dalam menentukan prestasi akademiknya. Kajian semasa menyiasat beberapa faktor dari pelbagai pendekatan perspektif termasuk seorang pelajar sendiri dan ibu bapa pelajar kelas 3, 4 dan 5 di sekolah-sekolah awam di Pakistan. Pendekatan pengawalan diri yang dinamakan kawalan semangat yang tinggi (EC) dianggap sebagai pembolehubah bebas dan menginternalisasi / mengekalkan tingkah laku dicadangkan untuk menengahi pemboleh ubah antara hubungan EC dan prestasi akademik. Penyelidikan hadir dibahagikan dalam fasa. Pertama, sifat psikometrik telah ditubuhkan untuk langkah-langkah yang telah diterjemahkan dari Pakistan dengan bantuan ujian percubaan, yang telah siap untuk semua langkah yang diterjemahkan untuk menginternalisasi, melambatkan tingkah laku dan pengendalian yang bersifat temperamental. Kedua, kajian utama dijalankan dengan mengumpulkan data dari populasi sasaran pelajar ke-3, ke-4 dan ke-5 melalui pensampelan purposive. Data bagi setiap pelajar telah selesai berdasarkan dua dimensi unit; ibu bapa pelajar menamatkan soal selidik mengenai kawalan semangat kanak-kanak yang sensitif dan menginformasikan corak tingkah laku manakala pelajar sendiri menyiapkan laporan diri tentang tingkah laku luaran. Konsep prestasi akademik diukur menerusi data sekunder hasil sekolah pelajar dalam empat mata pelajaran yang diajar (Bahasa Inggeris, Sains, Matematik dan Urdu) ke kelas standard ke-3, ke-4 dan ke-5 di sekolah-sekolah awam dengan satu garis panduan yang serupa. Kesahan dan kebolehpercayaan langkah-langkah adalah penting, Hipotesis lanjut telah diuji dalam kajian utama. Keputusan mencadangkan hubungan positif yang signifikan terhadap pengendalian sikap yang sensitif dan prestasi akademik (Bahasa Inggeris, Sains, Matematik dan Urdu). Melakukan dalaman dan mengeksperimenkan corak tingkah laku muncul untuk bertindak sebagai pengantara yang signifikan antara kawalan semangat Temperamental dan prestasi akademik.

Kata kunci: Kawalan semangat yang tinggi, Tingkah laku dalaman, Mengekalkan kelakuan Akademik

Abstract

Performance of a student is influenced by multiple factors that are significant in determining his academic performance. Present study investigated some of those factors from multiple perspective approach including a student himself and the parent of students of 3rd, 4th and 5th grade in public schools of Pakistan. An approach of self-regulation named as temperamental effortful control (EC) was considered as independent variable and internalizing/externalizing behaviors were proposed to be mediating variables between relationship of EC and academic performance. Present research was divided in phases. Firstly, psychometric properties were established for the already translated measures from Pakistan by the help of pilot testing, which was completed for all the translated measures of internalizing, externalizing behaviors and temperamental effortful control. Secondly, main study was conducted by collecting data from target population of 3rd, 4th and 5th grade students through purposive sampling. Data for each student was completed based on two dimensional units; parent of the student completed questionnaire about child's temperamental effortful control and internalizing behavioral patterns while student himself completed a self-report on externalizing behaviors. The concept of academic performance was measured through secondary data of student's school results in four commonly taught subjects (English, Science, Mathematics and Urdu) to 3rd, 4th and 5th standard classes in public schools with one similar course outline. Validity and reliability of measures were significant, Further hypotheses were tested in main study. Results suggested a significant positive relationship of temperamental effortful control and academic performance (English, Science, Mathematics and Urdu). Internalizing and externalizing behavioral patterns appeared to act as a significant mediator between Temperamental effortful control and academic performance.

Keywords: Temperamental effortful control, Internalizing behaviors, Externalizing Behaviors Academic performance

Acknowledgement

I would like to express my appreciation and gratitude to everyone who has contributed in completing this thesis. It was a pleasure to study under Dr. Azlizamani bin Zubir @ Salim and Dr. Daisy Jane C. Orcullo's supervision. I would also like to express my deepest and special gratitude to them for having faith in me, for patience, kindness, emotional support, constructive advice and technical help. I would like to express gratitude to my husband for providing unflinching help and support throughout these critical years that were inevitably stressful during my PhD. Thank you for standing by me at crucial times.

I am also very grateful to the University for providing me all the facilities, and assistance without which it would not have been possible for me to complete this work. Special gratitude is reserved for my mother and mother-in-law for cheering me up and remaining good friends thick and thin with sincerity and affection throughout.

My work would not have been complete if it were not for the help of all the Heads of the schools in Pakistan for facilitating my work in their institutions. I am also thankful to all those children, teachers and parents who participated in my study.

I am also thankful to Ellis & Rothbart, for allowing me to use their scale in current research. I dedicate this thesis to late Professor. Dr. Najib Ahmad Marzuki who was a reviewer for my proposal defence. He provided many positive suggestions and appreciated my effort of planning to design an assessment measure. May his soul rest in peace.

Without all the encouragement, love and caring of these people I would not have made it to this stage of my career. Finally, I say thank you to everyone I met in UUM. It was a nice time in my life to study in UUM and meet all of you.

Table of Content

Permission to Use.....	ii
Abstrak	iii
Abstract	iv
Acknowledgement.....	v
Table of Content.....	vi
List of Tables.....	x
List of Figures	xii
CHAPTER ONE INTRODUCTION	1
1.1 Background of the Study.....	1
1.2 Problem Statement	8
1.3 Objectives of the Study	20
1.4 Research Questions	21
1.5 Significance of the study	22
1.5.1 Academic Significance.....	22
1.5.2 Theoretical Significance	23
1.5.3 Practical Significance.....	25
1.6 Definition of Key Terms	27
1.6.1 General Definition of Temperamental Effortful Control	27
1.6.2 Operational Definition of Temperamental Effortful Control	27
1.6.3 General Definition of Internalizing Behaviors.....	28
1.6.4 Operational Definition of Internalizing Behaviors	28
1.6.5 General Definition of Externalizing Behaviors.....	29
1.6.6 Operational Definition of Externalizing Behaviors	30
1.6.7 Operational Definition of Academic Performance	31
1.7 Research Framework.....	32

1.8 Hypotheses	36
1.8.1 Section A: Hypotheses from aspect of relationship:	36
1.8.2 Section B: Hypotheses on mediation	38
1.8.3 Section C: Hypotheses from the aspect of differential nature.....	38
1.9 Summary of the chapter	40
CHAPTER TWO: LITERATURE REVIEW	41
2.1 Introduction	41
2.2 Self-regulation.....	41
2.3 Temperamental and Neural System Components of Self-regulation.....	44
2.4 Indigenous Reference to Self-regulation.....	46
2.5 Temperamental Effortful Control	47
2.6 Effortful Control and Self-regulation.....	50
2.7 Temperamental Effortful Control and Academic Performance	57
2.8 Comparison of Internalizing and Externalizing Behaviors	59
2.9 Self-regulation and Internalizing and Externalizing Continuum	60
2.10 Externalizing Behavioral Problems and Academic Performance	63
2.11 Effortful Control and Externalizing Behavior Problems	64
2.12 Externalizing and internalizing behavior related to academic achievement.....	70
2.13 Behavioral problems, Temperament and Academic Performance.....	77
3.14 Summary of the Chapter	88
CHAPTER THREE: RESEARCH METHODOLOGY	89
3.1 Introduction	89
3.2 Research Philosophy	89
3.3 Research Design.....	90
3.4 Pilot Study.....	93
3.4.1 Objectives.....	93

3.4.2 Sample.....	93
3.4.3 Instruments.....	97
3.4.4. Procedure.....	101
3.4.5. Results.....	102
3.4.6. Data Analysis	103
3.4.7 Result	104
3.5 Main Study.....	108
3.5.1 Unit of Analysis	108
3.5.2 Population and Sample.....	108
3.5.3 Participants.....	111
3.5.4 Instruments.....	113
3.5.4.1 Demographic Assessment:.....	113
3.5.4.2 Temperamental Effortful Control:	113
3.5.4.3 Internalizing Behaviors:.....	114
3.5.4.4. Externalizing Behaviors:.....	115
3.5.5.5 Academic Performance	115
3.5.6. Reliability and validity of Instrument	115
3.6. Ethics.....	116
3.7 Procedure.....	117
3.8. Statistical Analysis.....	119
3.9. Summary of the chapter	120
CHAPTER FOUR: DATA ANALYSIS AND FINDINGS.....	121
4.1. Section I: Sample Description.....	121
4.2. Section II: Testing Main Hypotheses.....	125
4.2.1 Relationship between dimensions of Effortful Control, Internalizing, Externalizing Behaviors and Academic Performance.....	126

4.2.2. Predicting relationship of study variables	130
4.3 Section III: Categories of academic performance and frequency distribution of demographic factors	148
4.3.1. Ordinal Logistic Regression Analysis.....	151
4.3.2. Relationship of Demographic Factors with Study Variables.....	153
4.3.2.1. Effortful Control, Internalizing/ Externalizing and Gender	153
4.3.2.2. Effortful Control, Internalizing/ Externalizing and Age	155
4.3.2.3. Effortful Control, Internalizing/ Externalizing and Class	157
4.3.2.4. Effortful Control, Internalizing/ Externalizing and Father's Education	159
4.3.2.5. Effortful Control, Internalizing/ Externalizing and Mother's Education.....	160
4.3.2.6. Effortful Control, Internalizing/ Externalizing and Mother's Profession	162
4.3.2.7. Effortful Control, Internalizing/ Externalizing and Family System.....	163
4.4 Summary of the chapter	164
CHAPTER FIVE: DISCUSSION.....	167
5.1 Introduction.....	167
5.2 Relationship between Effortful Control, Internalizing, Externalizing Behaviors and Academic Performance	169
5.3 Mediating role of internalizing behaviors between academic performance and effortful control	172
5.4 Mediating role of externalizing behaviors between academic performance and effortful control	174
5.5 Demographic characteristics and their role in determining academic performance	176
5.6 Implications and suggestions for future research.....	177
5.7 Conclusion	179
REFERENCES.....	183

List of Tables

Table 2. 1 Comparison of Temperamental Effortful Control According to Literature	55
Table 3. 1 Frequencies and Percentages of the Demographic Characteristics of Participants of Pilot Study (N= 40)	95
Table 3. 2 Reliability Analysis of Pilot Study	103
Table 3. 3 Percentage of Demographic Variables (N= 40) Falling “High, Average, Below average, Low and Poor” Categories on Total Academic Performance.	104
Table 3. 4 Multiple Regression Analysis for Determinants of Academic Performance	106
Table 3. 5 Demographic Characteristics of Participants involved in Main Study ...	111
Table 4. 1 Means and Standard Deviation of Age, Number of Siblings, Father’s education and Mother’s education (N=400)	122
Table 4. 2 Frequencies and Percentages of the Demographic Characteristics of Participants (N= 400).....	122
Table 4. 3 Summary of Inter-correlations of Academic Achievement, Temperamental Effortful Control, Internalizing Behaviors and Externalizing Behaviors.	125
Table 4. 4 Predictors of Total Academic Performance	130
Table 4. 5 Predictors of Performance in Urdu	132
Table 4. 6 Predictors of English Performance	134
Table 4. 7 Predictors of Performance in Science	136
Table 4. 8 Predictors of Performance in Mathematics	138
Table 4. 9 Mediation Analysis Showing the Role of Internalizing Behaviors in Mediating the Impact of Effortful Control and Academic Achievement	140
Table 4. 10 Mediation Analysis Showing the Role of Externalizing Behaviors in Mediating the Impact of Effortful Control and Academic Achievement	144
Table 4. 11 Percentage of Demographic Variables (N= 795) Falling “High, Average, Below average, Low and Poor” Categories on Total Academic Performance.	149

Table 4. 12 Ordinal Logistic Regression Analysis for Identifying Factors Associated with Categories of Academic Performance	152
Table 4. 13 Means, Standard Deviations t and p- values of Boys and Girls on Effortful Control and Internalizing/ Externalizing Behaviors.	154
Table 4. 14 One Way Analysis of Variance for Effortful Control, Internalizing/ Externalizing across Ages.....	155
Table 4. 15 One Way Analysis of Variance for Effortful Control, Internalizing/ Externalizing across Classes.....	157
Table 4. 16 One Way Analysis of Variance for Effortful Control, Internalizing/ Externalizing across Father's Education.....	159
Table 4. 17 One Way Analysis of Variance for Effortful Control, Internalizing/ Externalizing across Mother's Education	160
Table 4. 18 Means, Standard Deviations t and p- values of House Wives and Working Women on Effortful Control and Internalizing/ Externalizing Behaviors.	162
Table 4. 19 Means, Standard Deviations t and p- values of Family System on Effortful Control and Internalizing/ Externalizing Behaviors.	163
Table 4. 20 Summary of Hypothesis Result	164

List of Figures

Figure 1. 1 Theoretical and Research Framework	35
Figure 2. 1 Self-regulation (Karoly, 1993 and Rothbart & Bates, 1998).....	43
Figure 4. 1 Theory Through Set of Path Models	142
Figure 4. 2 Generic Mediated Model being tested	142
Figure 4. 3. Theory Through Set of Path Models	146
Figure 4. 4. Generic Mediated Model being tested.	146



CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

In Pakistan, several children perform low in academics and get labeled as failures and careless pupils and this label stay with them throughout their life and affect them negatively in terms of their self-worth and confidence to perform well in any field of life (Naeem, Mahmood, & Saleem, 2014). This phenomenon has been well known in the educationist's circle, but rare theoretical or empirical research proposed a solution to deal with the root cause of the problem i.e. why some children perform low in academics and some perform high.

School children in Pakistan are compared through the Intellectual Quotient by school psychologists and get stigmatized for lacking the ability to perform well (Cheema, 2016), while in other fields such as extracurricular activities they perform alright. The problem may have been in the challenged self-regulatory approaches (Muneer, Malik, & Aftab, 2019)). Researchers have suggested that academic success can be determined through self-regulation better than intelligence (Raver, 2012; Ursache, Blair, & Raver, 2012).

The underlying proposition of this thesis is about children who vary in performance along the academic period in middle childhood. It is suggested in this research that such children might possess distinctive profiles reflecting specific pattern of strengths and weaknesses in temperament and internalizing and externalizing behavioral continuum. The main purpose of enlightening such profiles is to use them in proposing individualized behavioral management plans in early childhood.

Moreover, Father's education and Mother's education is a significant predictor for academic performance and with increased level of father's and mother's education, level of academic performance was increased. Mother's profession (housewife or working woman) was also taken into account and it was seen that children of working woman showed higher academic performance.



REFERENCES

- Acker, J. R. (2019). Why Children Follow Rules: Legal Socialization and the Development of Legitimacy. *Social Forces*. <https://doi.org/10.1093/sf/soz084>
- Alessandri, G., Luengo Kanacri, B. P., Eisenberg, N., Zuffianò, A., Milioni, M., Vecchione, M., & Caprara, G. V. (2014). Pro-sociality during the transition from late adolescence to young adulthood: The role of effortful control and ego-resiliency. *Personality and Social Psychology Bulletin*, 40(11), 1451-1465. <https://doi.org/10.1177/0146167214549321>

Allan, N. P., & Lonigan, C. J. (2011). Examining the dimensionality of effortful control in preschool children and its relation to academic and socioemotional indicators. *Developmental psychology*, 47(4), 905.
<https://psycnet.apa.org/record/2011-09339-001>

American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders (DSM-5®)*. American Psychiatric Pub.

Anaya, B. (2016). Self-Regulation in Preschoolers: Validity of Hot and Cool Tasks as Predictive Measures of Academic and Socio-Emotional Aspects of School Readiness. Retrieved from:

<http://digitalcommons.wku.edu/cgi/viewcontent.cgi?article=2641&context=theses>

Arcia, E., Castillo, H., & Fernandez, M. C. (2004). Maternal cognitions about distress and anxiety in young Latino children with disruptive behaviors. *Transcultural Psychiatry*, 41, 99-119. <https://doi.org/10.1177/1363461504041356>

Ardila, A., Galeano, L. M., & Rosselli, M. (1998). Toward a model of neuropsychological activity. *Neuropsychology Review*, 8(4), 171-190.
<https://doi.org/10.1023/A:1021618218943>

Arnsten, A. F., & Shansky, R. M. (2004). Adolescence: Vulnerable Period for Stress-Induced Prefrontal Cortical Function? Introduction to Part IV. *Annals of the New*

York Academy of Sciences, 1021(1), 143-147.

<https://doi.org/10.1196/annals.1308.017>

Baddeley, A. (1996). Exploring the central executive. *The Quarterly Journal of Experimental Psychology: Section A*, 49(1), 5-28.

<https://doi.org/10.1080/713755608>

Baddeley, A. (2000). The episodic buffer: a new component of working memory? *Trends in cognitive sciences*, 4(11), 417-423. [https://doi.org/10.1016/S1364-6613\(00\)01538-2](https://doi.org/10.1016/S1364-6613(00)01538-2)

Barkley, R. A. (1990). *Attention-deficit Hyperactivity Disorder: A Handbook for Diagnosis and Treatment*. New York, NY: Guilford Press.

<https://psycnet.apa.org/record/2004-00006-013>

Bechara, A. (2004). The role of emotion in decision-making: evidence from neurological patients with orbitofrontal damage. *Brain and cognition*, 55(1), 30-40.

<https://doi.org/10.1016/j.bandc.2003.04.001>

Bender, W. N. (2004). *Learning disabilities: Characteristics, Identification, and Teaching Strategies*. Allyn & Bacon.

Berger, A. (2011). Self-regulation: Brain, cognition, and development. *American Psychological Association*. Retrieved from: <https://psycnet.apa.org/record/2010-23093-000>

- Bhamani, S. (2012). Urban Fathers' Involvement in Early Childhood Development: A Case Study from Pakistan. *Perspectives in Infant Mental Health*, 20(3-4), 9-12.
<https://doi.org/10.1080/00094056.2016.1134239>
- Brian, H. (2015). *Mixed methods research*. Retrieved from:
<https://doi.org/10.1080/00224499.2013.867924>
- Binet, A., & Simon, T. (1916). *The Development of Intelligence in Children: The Binet - Simon scale* (No. 11). Williams & Wilkins Company.
- Blair, C. (2002). School readiness: Integrating cognition and emotion in a neurobiological conceptualization of children's functioning at school entry. *American Psychologist*, 57(2), 111. Retrieved from:
<https://psycnet.apa.org/record/2002-10716-003>
- Blair, C., & Diamond, A. (2008). Biological processes in prevention and intervention: The promotion of self-regulation as a means of preventing school failure. *Development and Psychopathology*, 20(03), 899-911. Retrieved from:
<https://doi.org/10.1017/S0954579408000436>
- Blair, C., & Razza, R. P. (2007). Relating effortful control, executive function, and false belief understanding to emerging math and literacy ability in kindergarten. *Child Development*, 78(2), 647-663. Retrieved from: <https://doi.org/10.1111/j.1467-8624.2007.01019.x>

Boone, K. B., Ghaffarian, S., Lesser, I. M., Hill-Gutierrez, E., & G Berman, N. (1993).

Wisconsin Card Sorting Test performance in healthy, older adults: Relationship to age, sex, education, and IQ. *Journal of Clinical Psychology*, 49(1), 54-60.

Retrieved from: [https://doi.org/10.1002/1097-4679\(199301\)49:1<54::AID-JCLP2270490108>3.0.CO;2-6](https://doi.org/10.1002/1097-4679(199301)49:1<54::AID-JCLP2270490108>3.0.CO;2-6)

Borkowski, J. G., & Thorpe, P. K. (1994). *Self-Regulation and Motivation: A Life-Span*

Perspective on Underachievement. Retrieved from:

<https://psycnet.apa.org/record/1994-97658-002>

Brelau, J., Lane, M., Sampson, N., & Kessler, R.C. (2008). Mental disorders and

subsequent educational attainment in a US national sample. *Journal of Psychiatric Research*, 42(9), 708-716. Retrieved from:

<https://doi.org/10.1016/j.jpsychires.2008.01.016>

Bridgett, D. J., Oddi, K. B., Laake, L. M., Murdock, K. W., & Bachmann, M. N. (2013).

Integrating and differentiating aspects of self-regulation: Effortful control, executive functioning, and links to negative affectivity. *Emotion*, 13(1), 47.

Retrieved from: <https://psycnet.apa.org/record/2012-22631-001>

Briley, J. S., Thompson, T., & Iran-Nejad, A. (2009). Mathematical beliefs, self-

regulation, and achievement by university students in remedial mathematics courses. *Research in the Schools*, 16(2).

- Brocki, K. C., & Bohlin, G. (2006). Developmental change in the relation between executive functions and symptoms of ADHD and co-occurring behaviour problems. *Infant and Child Development*, 15(1), 19-40. Retrieved from: <https://doi.org/10.1002/icd.413>
- Brocki, K. C., Nyberg, L., Thorell, L. B., & Bohlin, G. (2007). Early concurrent and longitudinal symptoms of ADHD and ODD: Relations to different types of inhibitory control and working memory. *Journal of Child Psychology and Psychiatry*, 48(10), 1033-1041. <https://doi.org/10.1111/j.1469-7610.2007.01811.x>
- Brouwers, S. A., & van de Vijver, F. J. (2015). Contextualizing intelligence in assessment: The next step. *Human Resource Management Review*, 25(1), 38-46. <https://doi.org/10.1016/j.hrmr.2014.09.006>
- Brown, A. L., & Campione, J. C. (1986). Psychological theory and the study of learning disabilities. *American Psychologist*, 41(10), 1059. Retrieved from: <https://psycnet.apa.org/record/1987-08769-001>
- Bryant, A. L., Schulenberg, J., Bachman, J. G., O'Malley, P. M., & Johnston, L. D. (2000). Understanding the links among school misbehavior, academic achievement, and cigarette use: A national panel study of adolescents. *Prevention Science*, 1(2), 71-87. INEVAL, I. (2016). Instituto Nacional de Evaluación Educativa. Retrieved from: <https://link.springer.com/article/10.1023/A:1010038130788>

Bryman, A., & Bell, E. (2007). Business research strategies. *Business research methods*, 226-238.

Buckner, J. C., Mezzacappa, E., & Beardslee, W. R. (2003). Characteristics of resilient youths living in poverty: The role of self-regulatory processes. *Development and psychopathology*, 15(1), 139-162. Retrieved from:
<https://doi.org/10.1017/S0954579403000087>

Bull, R., & Johnston, R. S. (1997). Children's arithmetical difficulties: Contributions from processing speed, item identification, and short-term memory. *Journal of Experimental Child Psychology*, 65(1), 1-24. Retrieved from:
<https://doi.org/10.1006/jecp.1996.2358>

Bull, R., Johnston, R. S., & Roy, J. A. (1999). Exploring the roles of the visual-spatial sketch pad and central executive in children's arithmetical skills: Views from cognition and developmental neuropsychology. *Developmental Neuropsychology*, 15(3), 421-442. Retrieved from:
<https://doi.org/10.1080/87565649909540759>

Bunge, S. A., Dudukovic, N. M., Thomason, M. E., Vaidya, C. J., & Gabrieli, J. D. E. (2002). Immature frontal lobe contributions to cognitive control in children: Evidence from fMRI. *Neuron*, 33, 301–311. Retrieved from:
[https://doi.org/10.1016/S0896-6273\(01\)00583-9](https://doi.org/10.1016/S0896-6273(01)00583-9)

- Burns, M. K. (2016). Effect of cognitive processing assessments and interventions on academic outcome: Can 200 studies be wrong? *NASP Communiqué*, 44, 1, 26-29. Retrieved from: <http://readingmatterstomaine.org/wp-content/uploads/2016/10/Burns-2016.pdf>
- Bush, G., Luu, P., & Posner, M. I. (2000). Cognitive and emotional influences in anterior cingulate cortex. *Trends in Cognitive Science*, 4, 215–222. Retrieved from: [https://doi.org/10.1016/S1364-6613\(00\)01483-2](https://doi.org/10.1016/S1364-6613(00)01483-2)
- Bush, G., Whalen, P. J., Rosen, B. R., Jenike, M. A., McInerney, S. C., & Rauch, S. L. (1998). The counting Stroop: An interference task specialized for functional neuroimaging—Validation study with functional MRI. *Human Brain Mapping*, 6, 270–282. Retrieved from: [https://doi.org/10.1002/\(SICI\)1097-0193\(1998\)6:4<270::AID-HBM6>3.0.CO;2-0](https://doi.org/10.1002/(SICI)1097-0193(1998)6:4<270::AID-HBM6>3.0.CO;2-0)
- Calkins, S. D., Gill, K. L., Johnson, M. C., & Smith, C. L. (1999). Emotional reactivity and emotional regulation strategies as predictors of social behavior with peers during toddlerhood. *Social development*, 8(3), 310-334. Retrieved from: <https://doi.org/10.1111/1467-9507.00098>
- Callinan, S., Johnson, D., & Wells, A. (2015). A randomised controlled study of the effects of the attention training technique on traumatic stress symptoms, emotional attention set shifting and flexibility. *Cognitive Therapy and Research*, 39(1), 4-13. Retrieved from: <https://link.springer.com/article/10.1007/s10608-014-9634-8>

- Campbell, J. M., & Hammond, R. K. (2014). Best practices in rating scale assessment of children's behavior. In P. L. Harrison & A. Thomas (Eds.), *Best Practices In School Psychology: Data-Based And Collaborative Decision Making* (pp. 287-304).
- Canino, G., Shrout, P.E., Rubio-Stipec, M., Bird, H.R., Bravo, M., Ramirez, R.,... Garca, P. (2004). The DSM-IV rates of child and adolescent disorders in Puerto Rico. *Archives of General Psychiatry*, 61, 85-93. Retrieved from: <https://jamanetwork.com/journals/jamapsychiatry/article-abstract/481947>
- Cann, A. P., Connolly, M., Ruuska, R., MacNeil, M., Birmingham, T. B., Vandervoort, A. A., & Callaghan, J. P. (2008). Inter-rater reliability of output measures for a posture matching assessment approach: a pilot study with food service workers. *Ergonomics*, 51(4), 556-572. Retrieved from: <https://doi.org/10.1080/00140130701711455>
- Capaldi, D. M., & Rothbart, M. K. (1992). Development and validation of an early adolescent temperament measure. *The Journal of Early Adolescence*, 12(2), 153-173. Retrieved from: <https://doi.org/10.1177/0272431692012002002>
- Carlson, S. M., & Moses, L. J. (2001). Individual differences in inhibitory control and children's theory of mind. *Child development*, 72(4), 1032-1053. Retrieved from: <https://doi.org/10.1111/1467-8624.00333>

Carlson, S. M., Moses, L. J., & Breton, C. (2002). How specific is the relation between executive function and theory of mind? Contributions of inhibitory control and working memory. *Infant and Child Development*, 11, 73–92.

<https://doi.org/10.1002/icd.298>

Carpenter, P. A., Just, M. A., & Shell, P. (1990). What one intelligence test measures: a theoretical account of the processing in the Raven Progressive Matrices Test.

Psychological Review, 97(3), 404. Retrieved from:

<https://psycnet.apa.org/record/1990-27436-001>

Carroll, J. B. (1993). *Human cognitive abilities: A survey of factor-analytic studies*.

Cambridge University Press.

Carter, C. S., Krener, P., Chaderjian, M., Northcutt, C., & Wolfe, V. (1995).

Asymmetrical visual-spatial attentional performance in ADHD: evidence for a right hemispheric deficit. *Biological Psychiatry*, 37(11), 789-797. Retrieved

from: [https://doi.org/10.1016/0006-3223\(94\)00217-Q](https://doi.org/10.1016/0006-3223(94)00217-Q)

Case, L. P., Harris, K. R., & Graham, S. (1992). Improving the mathematical problem-solving skills of students with learning disabilities Self-regulated strategy

development. *The Journal of Special Education*, 26(1), 1-19. Retrieved from:

<https://doi.org/10.1177/002246699202600101>

Casillas, L. A., & Castillo, A. (2012). Discovering epistemological axes for academic programs in computer science through network analysis. *ReCIBE*. Retrieved from: <https://www.redalyc.org/pdf/5122/512251559004.pdf>

Caspi, A., & Shiner, R. L. (2006). Personality development. *Handbook of child psychology*. Retrieved from: <https://doi.org/10.1002/9780470147658.chpsy0306>

Cattell, R. B. (1966). The scree-test for the number of factors. *Multivariate Behavioral Research*, 1(2), 245-276. Retrieved from: https://doi.org/10.1207/s15327906mbr0102_10

Cauce, A. M., Domenech-Rodriguez, M., Paradise, M., Cochran, B. N., Shea, J. M., Srebnik, D., & Baydar, N. (2002). Cultural and contextual influences in mental health help seeking: A focus on ethnic minority youth. *Journal of Consulting and Clinical Psychology*, 70, 44-55. Retrieved from: <https://psycnet.apa.org/record/2002-10464-004>

Ceci, S. J. (1991). How much does schooling influence general intelligence and its cognitive components? A reassessment of the evidence. *Developmental Psychology*, 27(5), 703. Retrieved from: <https://psycnet.apa.org/record/1992-12228-001>

Chandrasekaran, B. (Ed.). (2013). *Intelligence as Adaptive Behavior: An Experiment in Computational Neuroethology* (Vol. 6). Academic Press.

Chang, H., Olson, S. L., Sameroff, A. J., & Sexton, H. R. (2011). Child effortful control as a mediator of parenting practices on externalizing behavior: Evidence for a sex-differentiated pathway across the transition from preschool to school. *Journal of Abnormal Child Psychology*, 39(1), 71-81. Retrieved from: <https://link.springer.com/article/10.1007/s10802-010-9437-7>

Chang, H., Olson, S. L., Sameroff, A. J., & Sexton, H. R. (2011). Child effortful control as a mediator of parenting practices on externalizing behavior: Evidence for a sex-differentiated pathway across the transition from preschool to school. *Journal of Abnormal Child Psychology*, 39(1), 71-81. Retrieved from: <https://link.springer.com/article/10.1007/s10802-010-9437-7>

Cheema, J., & Kitsantas, A. (2016). Predicting high school student use of learning strategies: the role of preferred learning styles and classroom climate. *Educational Psychology*, 36(5), 845-862. Retrieved from: <https://doi.org/10.1080/01443410.2014.981511>

Christ, S. E., White, D. A., Mandernach, T., & Keys, B. A. (2001). Inhibitory control across the life span. *Developmental Neuropsychology*, 20(3), 653-669. Retrieved from: https://www.tandfonline.com/doi/abs/10.1207/S15326942DN2003_7

Christopher, M. E., Miyake, A., Keenan, J. M., Pennington, B., DeFries, J. C., Wadsworth, S. J., & Olson, R. K. (2012). Predicting word reading and comprehension with executive function and speed measures across development:

a latent variable analysis. *Journal of Experimental Psychology: General*, 141(3), 470. Retrieved from: <https://psycnet.apa.org/record/2012-04376-001>

Cicchetti, D. (2002). The impact of social experience on neurobiological systems: Illustration from a constructivist view of child maltreatment. *Cognitive Development*, 17(3), 1407-1428. Retrieved from: [https://doi.org/10.1016/S0885-2014\(02\)00121-1](https://doi.org/10.1016/S0885-2014(02)00121-1)

Colom, R., Rebollo, I., Palacios, A., Juan-Espinosa, M., & Kyllonen, P. C. (2004). Working memory is (almost) perfectly predicted by g. *Intelligence*, 32(3), 277-296. Retrieved from: <https://doi.org/10.1016/j.intell.2003.12.002>

Connelly, M. J. (2008). *Fatal Misconception: The Struggle to Control World Population*. Harvard University Press. Retrieved from: [https://books.google.com.pk/books?hl=en&lr=&id=CwImmRvyyiEC&oi=fnd&pg=PR9&dq=Connelly,+M.+J.+\(2008\).+Fatal+Misconception:+The+Struggle+to+Control+World+Population.+Harvard+University+Press.&ots=FPYdkQZNtk&sig=kLpG9an17DSLqZbnP6iwE9y7-7c&redir_esc=y#v=onepage&q&f=false](https://books.google.com.pk/books?hl=en&lr=&id=CwImmRvyyiEC&oi=fnd&pg=PR9&dq=Connelly,+M.+J.+(2008).+Fatal+Misconception:+The+Struggle+to+Control+World+Population.+Harvard+University+Press.&ots=FPYdkQZNtk&sig=kLpG9an17DSLqZbnP6iwE9y7-7c&redir_esc=y#v=onepage&q&f=false)

Coplan, R. J., Barber, A. M., & Lagacé-Séguin, D. G. (1999). The role of child temperament as a predictor of early literacy and numeracy skills in preschoolers. *Early Childhood Research Quarterly*, 14(4), 537-553. Retrieved from: [https://doi.org/10.1016/S0885-2006\(99\)00025-3](https://doi.org/10.1016/S0885-2006(99)00025-3)

Crawford, J. R., Bryan, J., Luszcz, M. A., Obonsawin, M. C., & Stewart, L. (2000). The executive decline hypothesis of cognitive aging: Do executive deficits qualify as differential deficits and do they mediate age-related memory decline?. *Aging, Neuropsychology, and Cognition*, 7(1), 9-31. Retrieved from: <https://doi.org/10.1076/anec.7.1.9.806>

Creswell, J. W. (2009). Editorial: Mapping the field of mixed methods research.

Creswell, J. W. (2013). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Sage publications. Retrieved from: <https://journals.sagepub.com/doi/pdf/10.1177/1558689808330883>

Crocker, L., & Algina, J. (1986). *Introduction to Classical and Modern Test Theory*. Holt, Rinehart and Winston, 6277 Sea Harbor Drive, Orlando, FL 32887. Retrieved from: <https://eric.ed.gov/?id=ed312281>

Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process*. Sage.

Dadds (Eds.), The developmental psychopathology of anxiety (pp.60–91). New York: Oxford University Press.

Daley, K. C. (2004). Update on attention-deficit/hyperactivity disorder. *Current Opinion in Pediatrics*, 16, 217-226. Retrieved from: https://journals.lww.com/copeditrics/Abstract/2004/04000/Update_on_attention_deficit_hyperactivity_disorder.20.aspx

- Daley, T. C. (2002). The need for cross-cultural research on the pervasive developmental disorders. *Transcultural Psychiatry*, 39, 531-550. Retrieved from: <https://doi.org/10.1177/136346150203900409>
- Damasio, A. R. (1994). Descartes' Error: Emotion, Reason, and the Human Brain. Retrieved from: <https://doi.org/10.1177/00030651970450030301>
- Davis, E. P., Bruce, J., & Gunnar, M. R. (2002). The anterior attention network: Associations with temperament and neuroendocrine activity in 6-year-old children. *Developmental psychobiology*, 40(1), 43-56. <https://doi.org/10.1002/dev.10012>
- Dawson, P., & Guare, R. (2010). *Executive Skills in Children and Adolescents: A Practical Guide to Assessment and Intervention (2nd ed.)*. New York, NY: Guilford Press.
- De Jong, P. F., & Das-Smaal, E. A. (1995). Attention and intelligence: The validity of the Star Counting Test. *Journal of Educational Psychology*, 87(1), 80. Retrieved from: <https://psycnet.apa.org/record/1995-19835-001>
- Dempster, F. N. (1991). Inhibitory Processes: A Neglected Dimension of Intelligence. *Intelligence*, 15(2), 157-173. Retrieved from: [https://doi.org/10.1016/0160-2896\(91\)90028-C](https://doi.org/10.1016/0160-2896(91)90028-C)
- Dent, A. L., & Koenka, A. C. (2016). The relation between self-regulated learning and academic achievement across childhood and adolescence: A meta-

analysis. *Educational Psychology Review*, 28(3), 425-474. Retrieved from:
<https://doi.org/10.1007/s10648-015-9320-8>

Denzin, N. K. (1979). *The Interactionist Study of Social Organization: A Note on Method*. *Symbolic Interaction*, 2(1), 59-72. Retrieved
from: <https://doi.org/10.1525/si.1979.2.1.59>

Derryberry, D., & Rothbart, M. K. (1988). Arousal, affect, and attention as components
of temperament. *Journal of personality and social psychology*, 55(6), 958.
Retrieved from: <https://psycnet.apa.org/record/1989-14111-001>

Derryberry, D., & Rothbart, M. K. (1997). Reactive and effortful processes in the
organization of temperament. *Development and Psychopathology*, 9(4), 633-652.
Retrieved from: <https://doi.org/10.1017/S0954579497001375>

Diamond, A. (2002). Normal development of prefrontal cortex from birth to young
adulthood: Cognitive functions, anatomy, and biochemistry. *Principles of
Frontal Lobe Function*, 466-503. Retrieved from:
<http://devcogneuro.com/Publications/ChapterinStuss&Knight.pdf>

Diamond, A., & Taylor, C. (1996). Development of an aspect of executive control:
Development of the abilities to remember what I said and to “Do as I say, not as
I do.” *Developmental Psychobiology*, 29, 315–334. Retrieved from:
[https://doi.org/10.1002/\(SICI\)1098-2302\(199605\)29:4<315::AID-
DEV2>3.0.CO;2-T](https://doi.org/10.1002/(SICI)1098-2302(199605)29:4<315::AID-DEV2>3.0.CO;2-T)

- Diamond, A., Barnett, W. S., Thomas, J., & Munro, S. (2007). Preschool program improves cognitive control. *Science (New York, NY)*, 318(5855), 1387. Retrieved from: <https://science.sciencemag.org/content/318/5855/1387>
- Duan, X., Wei, S., Wang, G., & Shi, J. (2010). The relationship between executive functions and intelligence on 11-to 12-year-old children. *Psychological Test and Assessment Modeling*, 52(4), 419-431. Retrieved from: <https://core.ac.uk/download/pdf/25805117.pdf>
- Duckworth, A. L., Quinn, P. D., & Tsukayama, E. (2012). What No Child Left Behind leaves behind: The roles of IQ and self-control in predicting standardized achievement test scores and report card grades. *Journal of Educational Psychology*, 104(2), 439. Retrieved from: <https://psycnet.apa.org/record/2011-29379-001>
- Duckworth, A. L., Shulman, E. P., Mastronarde, A. J., Patrick, S. D., Zhang, J., & Druckman, J. (2015). Will not want: Self-control rather than motivation explains the female advantage in report card grades. *Learning and individual differences*, 39, 13-23. Retrieved from: <https://doi.org/10.1016/j.lindif.2015.02.006>
- Duckworth, K., Akerman, R., MacGregor, A., Salter, E., & Vorhaus, J. (2009). Self-Regulated Learning: A Literature Review. *Wider Benefits of Learning Research Report No. 33*. Retrieved from: <https://discovery.ucl.ac.uk/id/eprint/10015842/>

Duncan, G. J., Dowsett, C. J., Claessens, A., Magnuson, K., Huston, A. C., Klebanov, P., ... & Sexton, H. (2007). School readiness and later achievement. *Developmental psychology*, 43(6), 1428. Retrieved from: <https://psycnet.apa.org/buy/2007-16709-012>

Duncan, J., Emslie, H., Williams, P., Johnson, R., & Freer, C. (1996). Intelligence and the frontal lobe: The organization of goal-directed behavior. *Cognitive Psychology*, 30(3), 257-303. Retrieved from: <https://doi.org/10.1006/cogp.1996.0008>

Edwards, R. C., & Hans, S. L. (2015). Infant risk factors associated with internalizing, externalizing, and co-occurring behavior problems in young children. *Developmental Psychology*, 51(4), 489. Retrieved from: <https://psycnet.apa.org/buy/2015-04990-001>

Eisenberg, N., & Spinrad, T. L. (2004). Emotion-related regulation: Sharpening the definition. *Child development*, 75(2), 334-339. <https://doi.org/10.1111/j.1467-8624.2004.00674.x>

Eisenberg, N., Cumberland, A. J., Spinrad, T. L., Fabes, R. A., Shepard, S., Reiser, M., et al. (2001). The relations of regulation and emotionality to children's externalizing and internalizing problem behavior. *Child Development*, 72, 1112–1134. <https://doi.org/10.1111/1467-8624.00337>

- Eisenberg, N., Michalik, N., Spinrad, T. L., Hofer, C., Kupfer, A., Valiente, C., et al. (2007). The relations of effortful control and impulsivity to children's sympathy: A longitudinal study. *Cognitive Development*, 22, 544–567.
<https://doi.org/10.1016/j.cogdev.2007.08.003>
- Eisenberg, N., Sadovsky, A., Spinrad, T. L., Fabes, R. A., Losoya, S. H., Valiente, C., ... & Shepard, S. A. (2005). The relations of problem behavior status to children's negative emotionality, effortful control, and impulsivity: concurrent relations and prediction of change. *Developmental psychology*, 41(1), 193. Retrieved from: <https://psycnet.apa.org/record/2005-00130-018>
- Eisenberg, N., Smith, C. L., Sadovsky, A., & Spinrad, T. L. (2004). Effortful control: Relations with emotion regulation, adjustment, and socialization in childhood. In R. F. Baumeister & K. D. Vohs (Eds.), *Handbook of self-regulation: Research, theory, and applications* (pp. 259–282). New York: Guilford.
- Eisenberg, N., Valiente, C., & Eggum, N. D. (2010). Self-regulation and school readiness. *Early Education and Development*, 21(5), 681-698. doi: 10.1080/10409289.2010.497451. Retrieved from: <https://doi.org/10.1080/10409289.2010.497451>
- Eisenberg, N., Valiente, C., & Eggum, N. D. (2010). Self-regulation and school readiness. *Early education and development*, 21(5), 681-698. Retrieved from: <https://doi.org/10.1080/10409289.2010.497451>

Eisenberg, N., Valiente, C., Morris, A. S., Fabes, R. A., Cumberland, A., Reiser, M., ... & Losoya, S. (2003). Longitudinal relations among parental emotional expressivity, children's regulation, and quality of socioemotional functioning. *Developmental psychology*, 39(1), 3-19. Retrieved from: <https://psycnet.apa.org/record/2002-11235-003>

Eisenberg, N., Valiente, C., Spinrad, T. L., Cumberland, A. J., Liew, J., Reiser, M., et al. (2009). Longitudinal relations of children's effortful control, impulsivity, and negative emotionality to their externalizing, internalizing, and co-occurring behavior problems. *Developmental Psychology*, 45, 988–1008. Retrieved from: <https://doi.org/10.1037/a0016213>

Eisenberg, N., Zhou, Q., Spinrad, T. L., Valiente, C., Fabes, R. A., & Liew, J. (2005). Relations among positive parenting, children's effortful control, and externalizing problems: A three-wave longitudinal study. *Child Development*, 76, 1055–1071. <https://doi.org/10.1111/j.1467-8624.2005.00897.x>

Elhamid, A.A., Howe, A., & Reading, R. (2009). Prevalence of emotional and behavioural problems among 6–12 year old children in Egypt. *Social Psychiatry Psychiatric Epidemiology*, 44, 8-14. Retrieved from: <https://link.springer.com/article/10.1007/s00127-008-0394-1>

Ellis, L. K. (2003). Individual differences and adolescent psychosocial development. [Dissertation Abstract] Dissertation Abstracts International: Section B: *The*

Sciences and Engineering, 63(8-B), 3956. Retrieved from:
<https://psycnet.apa.org/record/2009-07318-009>

Ellis, L. K., & Rothbart, M. K. (2001, April). Revision of the early adolescent temperament questionnaire. In *Poster presented at the 2001 biennial meeting of the society for research in child development, Minneapolis, Minnesota*. Retrieved from: <http://www.academia.edu/download/32971995/lesa-ellis-srkd-poster-reprint.pdf>

Else-Quest, N. M., Hyde, J. S., Goldsmith, H. H., & Van Hulle, C. A. (2006). Gender differences in temperament: a meta-analysis. *Psychological bulletin*, 132(1), 33. Retrieved from: <https://psycnet.apa.org/record/2006-00818-004>

Engle, R. W., Tuholski, S. W., Laughlin, J. E., & Conway, A. R. (1999). Working memory, short-term memory, and general fluid intelligence: a latent-variable approach. *Journal of Experimental Psychology: General*, 128(3), 309. Retrieved from: <https://psycnet.apa.org/record/1999-11137-004>

Entwisle, D. R., Alexander, K. L., & Olson, L. S. (2005). Urban teenagers: Work and dropout. *Youth & Society*, 37(1), 3-32. Retrieved from:
<https://doi.org/10.1177/0044118X04268313>

Espy, K. A., McDiarmid, M. M., Cwik, M. F., Stalets, M. M., Hamby, A., & Senn, T. E. (2004). The contribution of executive functions to emergent mathematics skills

in preschool children. *Developmental Neuropsychology*, 26, 465–486.

https://doi.org/10.1207/s15326942dn2601_6

Evans, D. E., & Rothbart, M. K. (2007). Developing a model for adult temperament. *Journal of Research in Personality*, 41(4), 868-888.

<https://doi.org/10.1016/j.jrp.2006.11.002>

Fabes, R. A., Eisenberg, N., Jones, S., Smith, M., Guthrie, I. K., Poulin, R., et al. (1999). Regulation, emotionality, and preschoolers' socially competent peer interactions. *Child Development*, 70, 432– 442. Retrieved from: <https://doi.org/10.1111/1467-8624.00031>

Fabes, R. A., Martin, C. L., Hanish, L. D., Anders, M. C., & Madden-Derdich, D. A. (2003). Early school competence: the roles of sex-segregated play and effortful control. *Developmental psychology*, 39(5), 848. Retrieved from: <https://psycnet.apa.org/record/2003-99806-005>

Farah , L.G., Fayyad, J.A., Eapen, W., Cassir, Y., Salamoun, M. M., Tabet, C.C.,...Karam, E. G. (2009). ADHD in the Arab world a review of epidemiologic studies. *Journal of Attention Disorders*, 13, 211-222. Retrieved from: <https://doi.org/10.1177/1087054708325976>

Fatima, S., Sheikh, H., & Ardila, A. (2016). Association of parent–child relationships and executive functioning in South Asian Adolescents. *Neuropsychology*, 30(1), 65. Retrieved from: <https://psycnet.apa.org/record/2015-25390-001>

Fishman, J. A., & Galguera, T. (2003). *Introduction to Test Construction in the Social and Behavioral Sciences: A Practical Guide*. Rowman & Littlefield Publishers.

Fosco, G. M., Caruthers, A. S., & Dishion, T. J. (2012). A six-year predictive test of adolescent family relationship quality and effortful control pathways to emerging adult social and emotional health. *Journal of family psychology*, 26(4), 565.

Retrieved from: <https://psycnet.apa.org/record/2012-16089-001>

Friedman, N. P., & Miyake, A. (2004). The relations among inhibition and interference control functions: a latent-variable analysis. *Journal of Experimental Psychology: General*, 133(1), 101. Retrieved

from: <https://doi.org/10.1037/0096-3445.133.1.101>

Friedman, N. P., Miyake, A., Corley, R. P., Young, S. E., DeFries, J. C., & Hewitt, J. K.

(2006). Not all executive functions are related to intelligence. *Psychological Science*, 17(2), 172-179. Retrieved from: [https://doi.org/10.1111/j.1467-](https://doi.org/10.1111/j.1467-9280.2006.01681.x)

[9280.2006.01681.x](https://doi.org/10.1111/j.1467-9280.2006.01681.x)

Friso-van den Bos, I., van der Ven, S. H., Kroesbergen, E. H., & van Luit, J. E. (2013).

Working memory and mathematics in primary school children: A meta-analysis. *Educational Research Review*, 10, 29-44. Retrieved from:

<https://doi.org/10.1016/j.edurev.2013.05.003>

Galanaki, E.P., Polychronopoulou, S.A., & Babalis, T. K.(2008). Loneliness and social dissatisfaction among behaviourally at-risk children. *School Psychology*

International, 29(2), 214-229. Retrieved from
<https://doi.org/10.1177%2F0143034308090061>.

Gard, T., Taquet, M., Dixit, R., Hölzel, B. K., de Montjoye, Y. A., Brach, N., ... &
Lazar, S. W. (2014). Fluid intelligence and brain functional organization in aging
yoga and meditation practitioners. *Frontiers in Aging Neuroscience*, 6, 76.
Retrieved from: <https://doi.org/10.3389/fnagi.2014.00076>

Garner, J. K. (2009). Conceptualizing the relations between executive functions and self-
regulated learning. *The Journal of Psychology*, 143(4), 405-426. Retrieved from:
<https://doi.org/10.3200/JRLP.143.4.405-426>

Garner, P. W., & Waajid, B. (2008). The associations of emotion knowledge and
teacher–child relationships to preschool children’s school-related developmental
competence. *Journal of Applied Developmental Psychology*, 29(2), 89–100.
doi:10.1016/j.appdev.2007.12.001. Retrieved from:
<https://doi.org/10.1016/j.appdev.2007.12.001>

Garon, N., Bryson, S. E., & Smith, I. M. (2008). Executive function in preschoolers: a
review using an integrative framework. *Psychological Bulletin*, 134(1), 31.
Retrieved from: <https://psycnet.apa.org/record/2007-19419-002>

Garon, N., Bryson, S. E., & Smith, I. M. (2008). Executive function in preschoolers: a
review using an integrative framework. *Psychological bulletin*, 134(1), 31.
Retrieved from: <https://psycnet.apa.org/record/2007-19419-002>

- Gathercole, S. E., Alloway, T. P., Willis, C., & Adams, A. M. (2006). Working memory in children with reading disabilities. *Journal of Experimental Child Psychology*, 93(3), 265-281. Retrieved from: <https://doi.org/10.1016/j.jecp.2005.08.003>
- Geary, D. C. (1993). Mathematical disabilities: cognitive, neuropsychological, and genetic components. *Psychological Bulletin*, 114(2), 345. Retrieved from: <https://psycnet.apa.org/record/1994-02259-001>
- Gerardi-Caulton, G. (2000). Sensitivity to spatial conflict and the development of self-regulation in children 24–36 months of age. *Developmental Science*, 3(4), 397-404. <https://doi.org/10.1111/1467-7687.00134>
- Gerstadt, C. L., Hong, Y. J., & Diamond, A. (1994). The relationship between cognition and action: Performance of children 3.5–7 years old on a Stroop-like day-night test. *Cognition*, 53, 129–153. Retrieved from: [https://doi.org/10.1016/0010-0277\(94\)90068-X](https://doi.org/10.1016/0010-0277(94)90068-X)
- Geurts, H. M., Corbett, B., & Solomon, M. (2009). The paradox of cognitive flexibility in Autism. *Trends in Cognitive Sciences*, 13, 74-82. Retrieved from: <https://doi.org/10.1016/j.tics.2008.11.006>
- Golden, C. J. (1981). The Luria-Nebraska Children's Battery: Theory and formulation. In: G.W. Hynd & J. E. Obrzut (Eds.), *Neuropsychological Assessment and the*

School-Aged Child (pp. 277–302). New York: Grune & Stratton. Retrieved from:
<https://ci.nii.ac.jp/naid/10010103779/>

Goldsmith, D. F., & Rogoff, B. (1997). Mothers' and toddlers' coordinated joint focus of attention: variations with maternal dysphoric symptoms. *Developmental Psychology*, 33(1), 113. Retrieved from: <https://psycnet.apa.org/record/1997-02105-013>

Goldsmith, H. H. (1996). Studying temperament via construction of the Toddler Behavior Assessment Questionnaire. *Child development*, 67(1), 218-235.
Retrieved from: <https://doi.org/10.1111/j.1467-8624.1996.tb01730.x>

Goldstein, S., Naglieri, J. A., Princiotta, D., & Otero, T. M. (2014). Introduction: a history of executive functioning as a theoretical and clinical construct. In *Handbook of Executive Functioning* (pp. 3-12). Springer New York. Retrieved from: https://link.springer.com/chapter/10.1007/978-1-4614-8106-5_1

Gonzalez, C., Fuentes, L. J., Carranza, J. A., & Estevez, A. F. (2001). Temperament and attention in the self-regulation of 7-year-old children. *Personality and Individual Differences*, 30, 931–946. Retrieved from: [https://doi.org/10.1016/S0191-8869\(00\)00084-2](https://doi.org/10.1016/S0191-8869(00)00084-2)

Goral, M. (2004). First-language decline in healthy aging: Implications for attrition in bilingualism. *Journal of Neurolinguistics*, 17(1), 31-52. Retrieved from:
[https://doi.org/10.1016/S0911-6044\(03\)00052-6](https://doi.org/10.1016/S0911-6044(03)00052-6)

Graf, P., & Uttl, B. (1995). Component processes of memory: Changes across the adult lifespan. *Swiss Journal of Psychology*, 54(2), 113-130. Retrieved from: <http://www.docbob.ca/pubs/1995GrafUttlComponentProcesses.pdf>

Granader, Y., Wallace, G., Hardy, K., Yerys, B. Lawson, R., Rosenthal, M., ... Kenworthy, L. (2014). Characterizing the factor structure of parent reported executive function in autism spectrum disorders: The impact of cognitive inflexibility. *Journal of Autism and Developmental Disorders*, 44, 3056-3062. Retrieved from: <https://link.springer.com/article/10.1007/s10803-014-2169-8>

Grantham-McGregor, S., Cheung, Y. B., Cueto, S., Glewwe, P., Richter, L., Strupp, B., & International Child Development Steering Group. (2007). *Developmental Potential in the First 5 Years for Children in Developing Countries*. The lancet, 369(9555), 60-70. Retrieved from: <https://www.sciencedirect.com/science/article/pii/S0140673607600324>

Gray, J. A. (1982). On mapping anxiety. *Behavioral and Brain Sciences*, 5(03), 506-534.

Gray, J. R., Braver, T. S., & Raichle, M. E. (2002). Integration of emotion and cognition in the lateral prefrontal cortex. *Proceedings of the National Academy of Sciences*, 99(6), 4115-4120. Retrieved from: <https://doi.org/10.1073/pnas.062381899>

Gunstad, J., Paul, R. H., Brickman, A. M., Cohen, R. A., Arns, M., Roe, D., ... &

Gordon, E. (2006). Patterns of cognitive performance in middle-aged and older adults: A cluster analytic examination. *Journal of Geriatric Psychiatry and Neurology*, 19(2), 59-64. Retrieved from:
<https://doi.org/10.1177/0891988705284738>

Gusdorf, L., Karreman, A., van Aken, M. A., Deković, M., & van Tuijl, C. (2011). The structure of effortful control in preschoolers and its relation to externalizing problems. *British Journal of Developmental Psychology*, 29(3), 612-634.
<https://doi.org/10.1348/026151010X526542>

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). Multivariate data analysis: Global edition.

Happaney, K., Zelazo, P. D., & Stuss, D. T. (2004). Development of orbitofrontal function: Current themes and future directions. *Brain and Cognition*, 55(1), 1-10.
<https://doi.org/10.1016/j.bandc.2004.01.001>

Hartman, S. A. (2011). *The Implications of Executive Function and Prototypical Student Performance in Middle School*. Retrieved from:
https://digitalcommons.pcom.edu/psychology_dissertations/201/

Heaton, R. (1981). *Wisconsin Card Sorting Test: Manual*. Odessa, FL: Psychological Assessment Resources. Retrieved from: <https://ci.nii.ac.jp/naid/10015457224/>

- Helland, T., & Asbjørnsen, A. (2000). Executive functions in dyslexia. *Child Neuropsychology*, 6(1), 37-48. Retrieved from: [https://doi.org/10.1076/0929-7049\(200003\)6:1;1-B;FT037](https://doi.org/10.1076/0929-7049(200003)6:1;1-B;FT037)
- Henry, L., Cornoldi, C., & Mähler, C. (2010). Special issues on ‘working memory and executive functioning in individuals with intellectual disabilities’. *Journal of Intellectual Disability Research*, 54(4), 293-294. Retrieved from: <https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1365-2788.2010.01266.x>
- Hertzog, M. A. (2008). Considerations in determining sample size for pilot studies. *Research in nursing & health*, 31(2), 180-191. <https://doi.org/10.1002/nur.20247>
- Hertzog, M. A. (2008). Considerations in determining sample size for pilot studies. *Research in nursing & health*, 31(2), 180-191. Retrieved from: <https://doi.org/10.1002/nur.20247>
- Hill, E. L. (2004). Evaluating the theory of EF deficits in autism. *Developmental Review*, 24, 189–233. Retrieved from: <https://doi.org/10.1016/j.dr.2004.01.001>
- Hofmann, W., Schmeichel, B. J., & Baddeley, A. D. (2012). Executive functions and self-regulation. *Trends in cognitive sciences*, 16(3), 174-180. Retrieved from: <https://doi.org/10.1016/j.tics.2012.01.006>
- Howes, N. L., Bigler, E. D., Burlingame, G. M., & Lawson, J. S. (2003). Memory Performance of Children with Dyslexia A Comparative Analysis of Theoretical

Perspectives. *Journal of Learning Disabilities*, 36(3), 230-246. Retrieved from:
<https://doi.org/10.1177/002221940303600303>

Howes, N. L., Bigler, E. D., Lawson, J. S., & Burlingame, G. M. (1999). Reading disability subtypes and the test of memory and learning. *Archives of Clinical Neuropsychology*, 14(3), 317-339. Retrieved from:
<https://doi.org/10.1093/arclin/14.3.317>

Howse, R. B., Calkins, S. D., Anastopoulos, A. D., Keane, S. P., & Shelton, T. L. (2003). Regulatory contributors to children's kindergarten achievement. *Early Education and Development*, 14(1), 101-120. Retrieved from:
https://doi.org/10.1207/s15566935eed1401_7

Hughes, C., & Graham, A. (2002). Measuring executive functions in childhood: Problems and solutions? *Child and Adolescent Mental Health*, 7, 131-142. Retrieved from: <https://doi.org/10.1111/1475-3588.00024>

Hughes, C., Dunn, J., & White, A. (1998). Trick or treat? Uneven understanding of mind and emotion and executive dysfunction in “hard-to-manage” preschoolers. *Journal of Child Psychology and Psychiatry*, 39, 981–994. Retrieved from: <https://doi.org/10.1111/1469-7610.00401>

Huizinga, M., Dolan, C. V., & van der Molen, M. W. (2006). Age-related change in executive function: Developmental trends and a latent variable

analysis. *Neuropsychologia*, 44(11), 2017-2036. Retrieved from:
<https://doi.org/10.1016/j.neuropsychologia.2006.01.010>

Hunter, W. S. (1913). The delayed reaction in animals and children. *Animal Behavior Monographs*, 2, 86. Retrieved from: <https://ci.nii.ac.jp/naid/10029897471/>

Isaac, S., & Michael, W. B. (1971). *Handbook in Research and Evaluation*.

Izard, C. E. (2002). Translating emotion theory and research into preventive interventions. *Psychological bulletin*, 128(5), 796. Retrieved from:
<https://psycnet.apa.org/buy/2002-15487-006>

Jacques, S., & Marcovitch, S. (2010). Development of executive function across the life span. *The handbook of life-span development*. Retrieved from: <https://doi.org/10.1002/9780470880166.hlsd001013>

Johnson, P., & Duberley, J. (2000). *Understanding management research: An introduction to epistemology*. Sage.

Jurado, M. B., & Rosselli, M. (2007). The elusive nature of executive functions: a review of our current understanding. *Neuropsychology Review*, 17(3), 213-233. Retrieved from: <https://link.springer.com/article/10.1007/s11065-007-9040-z>

Kagan, J., Rosman, B. L., Day, L., Albert, J., & Phillips, W. (1964). Information processing in the child: Significance of analytic and reflective attitudes.

Psychological Monographs, 78(1), Whole No. 578. Retrieved from:

<https://psycnet.apa.org/record/2011-18712-001>

Kahn, J. H. (2006). Factor analysis in counseling psychology research, training, and practice: Principles, advances, and applications. *The Counseling Psychologist*, 34(5), 684-718. Retrieved from: <https://doi.org/10.1177/0011000006286347>

Kaiser, H. F. (1974). An index of factorial simplicity. *Psychometrika*, 39(1), 31-36.

Retrieved from: <https://link.springer.com/article/10.1007/BF02291575>

Kamran, A., (2011). *Learning Difficulties*. Retrieved from:

<https://link.springer.com/article/10.1007/s00464-010-1208-6>

Karoly, P. (1993). Mechanisms of self-regulation: A systems view. *Annual review of psychology*, 44(1), 23-52. Retrieved from:

<https://www.annualreviews.org/doi/abs/10.1146/annurev.ps.44.020193.000323?journalCode=psych>

Kathawala, A., & Bhamani, S. (2015). Impact of self-regulation skills on academic performance of young children in private schools of Karachi. *Journal of Education and Educational Development*, 2(1), 30-49. Retrieved from: <http://dx.doi.org/10.22555/joeed.v2i1.45>

Kerlinger, F. N. (1986). *Foundations of behavioral research* (3rd ed.). New York: Holt, Rinehart and Winston.

Kerr, A., & Zelazo, P. D. (2004). Development of “hot” executive function: The children’s gambling task. *Brain and cognition*, 55(1), 148-157. Retrieved from: [https://doi.org/10.1016/S0278-2626\(03\)00275-6](https://doi.org/10.1016/S0278-2626(03)00275-6)

Kim, J. O., & Mueller, C. W. (1978). *Factor Analysis: Statistical Methods and Practical Issues* (Vol. 14). Sage.

Kirkham, N. Z., Cruess, L., & Diamond, A. (2003). Helping children apply their knowledge to their behavior on a dimension-switching task. *Developmental Science*, 6(5), 449-467. Retrieved from: <https://doi.org/10.1111/1467-7687.00300>

Klenberg, L., Korkman, M., & Lahti-Nuuttila, P. (2001). Differential development of attention and executive functions in 3-to 12-year-old Finnish children. *Developmental Neuropsychology*, 20(1), 407-428. Retrieved from: https://doi.org/10.1207/S15326942DN2001_6

Kline, P. (2014). *An Easy Guide to Factor Analysis*. Routledge. Retrieved from: <https://content.taylorfrancis.com/books/download?dac=C2004-0-04431-0&isbn=9781317725602&format=googlePreviewPdf>

- Kline, P. (2015). *A Handbook of Test Construction (Psychology Revivals): Introduction to Psychometric Design*. Routledge. Retrieved from:
<https://doi.org/10.4324/9781315695990>
- Knight, R. T., & Stuss, D. T. (2002). Prefrontal cortex: The present and the future. *Principles of Frontal Lobe Function*, 573-597. Retrieved from:
https://knightlab.berkeley.edu/statics/publications/2011/04/29/Principles_of_Frontal_Lobe_Function.pdf
- Kocek, T. B. (2015). The influence of executive function on externalising and internalising behaviours in middle childhood. Retrieved from:
<http://epubs.scu.edu.au/cgi/viewcontent.cgi?article=1459&context=theses>
- Kochanska, G., & Knaack, A. (2003). Effortful control as a personality characteristic of young children: Antecedents, correlates, and consequences. *Journal of Personality*, 71, 1087–1112. <https://doi.org/10.1111/1467-6494.7106008>
- Kochanska, G., Murray, K. T., & Harlan, E. T. (2000). Effortful control in early childhood: continuity and change, antecedents, and implications for social development. *Developmental Psychology*, 36(2), 220. Retrieved from:
<https://psycnet.apa.org/record/2000-13792-008>
- Kochanska, G., Murray, K., & Coy, K. C. (1997). Inhibitory control as a contributor to conscience in childhood: From toddler to early school age. *Child*

development, 68(2), 263-277. Retrieved from: <https://doi.org/10.1111/j.1467-8624.1997.tb01939.x>

Kochanska, G., Murray, K., Jacques, T. Y., Koenig, A. L., & Vandegeest, K. A. (1996). Inhibitory control in young children and its role in emerging internalization. *Child development*, 67(2), 490-507. Retrieved from: <https://doi.org/10.1111/j.1467-8624.1996.tb01747.x>

Kopp, C. B. (1989). Regulation of distress and negative emotions: A developmental view. *Developmental psychology*, 25(3), 343. Retrieved from: <https://psycnet.apa.org/buy/1989-29146-001>

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607-610. Retrieved from: <https://doi.org/10.1177/001316447003000308>

Kreuger, L., & Neuman, W. L. (2006). *Social Work Research Methods: Qualitative and Quantitative Approaches: with Research Navigator*. USA: Pearson / Allyn and Bacon.

Kupersmidt, J. B., & Coie, J. D. (1990). Preadolescent peer status, aggression, and school adjustment as predictors of externalizing problems in adolescence. *Child development*, 61(5), 1350-1362. Retrieved from: <https://doi.org/10.1111/j.1467-8624.1990.tb02866.x>

Kyllonen, P. C. (1993). Aptitude testing inspired by information processing: A test of the four-sources model. *The Journal of General Psychology*, 120(3), 375-405.

Retrieved from: <https://doi.org/10.1080/00221309.1993.9711154>

Kyllonen, P. C., & Christal, R. E. (1990). Reasoning ability is (little more than) working-memory capacity? *Intelligence*, 14(4), 389-433. Retrieved from:

[https://doi.org/10.1016/S0160-2896\(05\)80012-1](https://doi.org/10.1016/S0160-2896(05)80012-1)

Lackey, N. R., & Wingate, A. L. (1998). The pilot study: One key to research success. *Advanced design in nursing research*, 2, 375-387.

Ladd, G. W., Birch, S. H., & Buhs, E. S. (1999). Children's social and scholastic lives in kindergarten: Related spheres of influence?. *Child development*, 70(6), 1373-1400. Retrieved from: <https://doi.org/10.1111/1467-8624.00101>

Ladd, G. W., Buhs, E. S., & Seid, M. (2000). Children's initial sentiments about kindergarten: Is school liking an antecedent of early classroom participation and achievement?. *Merrill-Palmer Quarterly* (1982-), 255-279. Retrieved from: <https://www.jstor.org/stable/pdf/23093716.pdf?seq=1>

Lagattuta, K. H., Sayfan, L., & Monsour, M. (2010). A new measure for assessing executive function across a wide age range: Children and adults find happy-sad more difficult than day-night. *Developmental Science*, 14, 481-489. <https://doi.org/10.1111/j.1467-7687.2010.00994.x>

- Lane, K. L., Barton-Arwood, S.M., Nelson, J. R., & Wehby, J. (2008). Academic performance of students with emotional and behavioral disorders served in a self-contained. *Journal of Behavior Education, 17*, 43-62. Retrieved from: <https://link.springer.com/article/10.1007/s10864-007-9050-1>
- Lane, K. L., Carter, E. W., Pierson, M. R., & Glaeser, B. C. (2006). Academic, social, and behavioral characteristics of high school students with emotional disturbances or learning disabilities. *Journal of Emotional and Behavioral Disorders, 14*, 108-117. <https://doi.org/10.1177/10634266060140020101>
- Lane, K. L., Gresham, F. M., MacMillan, D., & Bocian, K. (2001). Early detection of students with antisocial behavior and hyperactivity problems. *Education and Treatment of Children, 24*, 294-308. Retrieved from: <https://search.proquest.com/openview/39add2051911ec30651d65658c29d6e1/1?pq-origsite=gscholar&cbl=31077>
- Lane, K. L., Parks, R. J., Kalberg, J. R., & Carter, E. W. (2007). Systematic screening at the middle school level: Score reliability and validity of the student risk screening scale. *Journal of Emotional and Behavioral Disorders, 15* (4), 209-222. <https://doi.org/10.1177/10634266070150040301>
- Lanfranchi, S., Jerman, O., Dal Pont, E. D., Alberti, A., & Vianello, R. (2010). Executive function in adolescents with Down syndrome. *Journal of Intellectual Disability Research, 54*, 308-319. <https://doi.org/10.1111/j.1365-2788.2010.01262.x>

- Latzman, R. D., Elkovitch, N., Young, J., & Clark, L. A. (2010). The contribution of executive functioning to academic achievement among male adolescents. *Journal of Clinical and Experimental Neuropsychology*, 32(5), 455-462.
<https://doi.org/10.1080/13803390903164363>
- Leedy, P. D., & Ormrod, J. E. (2005). *Practical research: Planning and design* (5th ed.). New Jersey: Pearson Educational International and Prentice Hall. Retrieved from:
<ftp://doc.nit.ac.ir/cee/computer/jazayeri.hamid/Research%20Method/Book/Practical%20Research.pdf>
- Lehto, J. E., Juujärvi, P., Kooistra, L., & Pulkkinen, L. (2003). Dimensions of executive functioning: Evidence from children. *British Journal of Developmental Psychology*, 21(1), 59-80. Retrieved from: <https://doi.org/10.1348/026151003321164627>
- Lengua, L. J., Bush, N. R., Long, A. C., Kovacs, E. A., & Trancik, A. M. (2008). Effortful control as a moderator of the relation between contextual risk factors and growth in adjustment problems. *Development and Psychopathology*, 2, 509–528. Retrieved from: <https://doi.org/10.1017/S0954579408000254>
- Lengua, L. J., Honorado, E., & Bush, N. R. (2007). Contextual risk and parenting as predictors of effortful control and social competence in preschool children. *Journal of Applied Developmental Psychology*, 28(1), 40-55. Retrieved from: <https://doi.org/10.1016/j.appdev.2006.10.001>

Lester, P. E., Inman, D., & Bishop, L. K. (2014). *Handbook of Tests and Measurement in Education and the Social Sciences*. Rowman & Littlefield.

Levin, H. S., Culhane, K. A., Hartmann, J., Evankovich, K., Mattson, A. J., Harward, H., et al. (1991). Developmental changes in performance on tests of purported frontal lobe functioning. *Developmental Neuropsychology*, 7, 377–395.
<https://doi.org/10.1080/87565649109540499>

Liew, J. (2012). Effortful control, executive functions, and education: Bringing self-regulatory and social-emotional competencies to the table. *Child Development Perspectives*, 6(2), 105-111. <https://doi.org/10.1111/j.1750-8606.2011.00196.x>

Liew, J., McTigue, E. M., Barrois, L., & Hughes, J. N. (2008). Adaptive and effortful control and academic self-efficacy beliefs on achievement: A longitudinal study of 1st through 3rd graders. *Early childhood research quarterly*, 23(4), 515-526.
Retrieved from: <https://doi.org/10.1016/j.ecresq.2008.07.003>

Li-Grining, C. P. (2007). Effortful control among low-income preschoolers in three cities: Stability, change, and individual differences. *Developmental Psychology*, 43(1), 208. Retrieved from: <https://psycnet.apa.org/record/2006-23020-017>

Lindsay, R. L., Tomazic, T., Levine, M. D., & Accardo, P. J. (1999). Impact of attentional dysfunction in dyscalculia. *Developmental Medicine & Child Neurology*, 41(09), 639-642. Retrieved from: <https://doi.org/10.1017/S0012162299001309>

- Liu, D., Diorio, J., Day, J. C., Francis, D. D., & Meaney, M. J. (2000). Maternal care, hippocampal synaptogenesis and cognitive development in rats. *Nature neuroscience*, 3(8), 799-806. <https://doi.org/10.1038/77702>
- Lonigan, C. J., & Phillips, B. M. (2001). Temperamental influences on the development of anxiety disorders. In M. W. Vasey & M. R. Dadds (Eds.), *The developmental psychopathology of anxiety* (pp. 60–91). New York: Oxford University Press.
- Lonigan, C. J., & Phillips, B. M. (2001). Temperamental influences on the development of anxiety disorders. In M. W. Vasey & M. R.
- Lupien, S. J., Gillin, C. J., & Hauger, R. L. (1999). Working memory is more sensitive than declarative memory to the acute effects of corticosteroids: A dose–response study in humans. *Behavioral neuroscience*, 113(3), 420-430. Retrieved from: <https://psycnet.apa.org/record/1999-11588-002>
- Lynch, F., Milles, C., Daly, I., & Fitzpatrick, C. (2006). Challenging times: Prevalence of psychiatric disorders and suicidal behaviours in Irish adolescents. *Journal of Adolescence*, 29, 555-573. Retrieved from: <https://doi.org/10.1016/j.adolescence.2005.08.011>
- Mahmood, K. (2005). Multipurpose community telecenters for rural development in Pakistan. *The Electronic Library*, 23(2), 204-220. Retrieved from: <https://doi.org/10.1108/02640470510592906>

- Mahmood, Z. (1991). Intelligence, IQ and the third world. *Pakistan Journal of Psychological Research*, 6(1-2). Retrieved from:
<http://www.pjprnip.edu.pk/pjpr/index.php/pjpr/article/view/240>
- Malpass, J. R., O'Neil, H. F., & Hocevar Jr, D. (1999). Self-regulation, goal orientation, self-efficacy, worry, and high-stakes math achievement for mathematically gifted high school students 1, 2. *Roeper Review*, 21(4), 281-288. Retrieved from:
<https://doi.org/10.1080/02783199909553976>
- Manly, T., Anderson, V., Nimmo-Smith, I., Turner, A., Watson, P., & Robertson, I. H. (2001). The differential assessment of children's attention: The Test of Everyday Attention for Children (TEA-Ch), normative sample and ADHD performance. *Journal of Child Psychology and Psychiatry*, 42(08), 1065-1081. Retrieved from:
<https://doi.org/10.1017/S0021963001007909>
- Mash, E. J., & Wolfe, D.A. (2005). Abnormal child psychology (3rd ed.). USA: Wadsworth, Inc. Retrieved from: <http://dx.doi.org/10.15700/saje.v30n3a364>
- McCarthy, D. (1972). *Manual for the McCarthy Scales for Children's Abilities* New York: PsychologicalCorp.
- McClelland, M. M., Cameron, C. E., Connor, C. M., Farris, C. L., Jewkes, A. M., & Morrison, F. J. (2007). Links between behavioral regulation and preschoolers' literacy, vocabulary, and math skills. *Developmental psychology*, 43(4), 947.
<https://doi.org/10.1037/0012-1649.43.4.947>

- McCloskey, G., Perkins, L. A., & Van Divner, B. (2009). *Assessment and Intervention for Executive Function Difficulties*. New York, NY: Routledge.
- McClosky, D. (2010). Any Domain Parsing: Automatic Domain Adaptation for Natural Language Parsing. Retrieved from: <https://dl.acm.org/citation.cfm?id=2020153>
- McConaughy, S. H., & Ritter, D. R. (2014). Best practices in multimethod assessment of emotional and behavioral disorders. In P. L. Harrison & A. Thomas (Eds.), *Best Practices In School Psychology: Data-Based And Collaborative Decision Making* (pp. 367-389). Bethesda, MD: National Association of School Psychologists.
- McLean, J. F., & Hitch, G. J. (1999). Working memory impairments in children with specific arithmetic learning difficulties. *Journal of experimental Child Psychology*, 74(3), 240-260. Retrieved from: <https://doi.org/10.1006/jecp.1999.2516>
- Melby-Lervåg, M., & Hulme, C. (2013). Is working memory training effective? A meta-analytic review. *Developmental Psychology*, 49, 270-291. Retrieved from: <https://psycnet.apa.org/buy/2012-12954-001>
- Meltzer, L. (2010). *Promoting Executive Function in the Classroom*. Guilford Press.
- Meltzer, L. (Ed.). (2011). *Executive Function in Education: From Theory to Practice*. Guilford Press. Retrieved from: <https://psycnet.apa.org/record/2012-33545-011>

- Meltzer, L., & Montague, M. (2001). Strategic learning in students with learning disabilities: What have we learned? *Research and Global Perspectives in Learning Disabilities: Essays in Honor of William M. Cruickshank*, 111-130.
- Meltzer, L., Pollica, L., Barzillai, M., & Meltzer, L. (2007). Executive function in the classroom: Embedding strategy instruction into daily teaching practices. *Executive Function in Education: From Theory to Practice*, 165-193.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative Data Analysis: A Sourcebook*. Beverly Hills: Sage Publications.
- Miller, E. K., & Cohen, J. D. (2001). An integrative theory of prefrontal cortex function. *Annual Review of Neuroscience*, 24(1), 167-202. Retrieved from: <https://www.annualreviews.org/doi/abs/10.1146/annurev.neuro.24.1.167>
- Mintz, T. M., Hamre, B. K., & Hatfield, B. E. (2011). The role of effortful control in mediating the association between maternal sensitivity and children's social and relational competence and problems in first grade. *Early Education & Development*, 22(3), 360-387. Retrieved from: <https://doi.org/10.1080/10409289.2011.569317>
- Miranda, A., Villaescusa, M. I., & Vidal-Abarca, E. (1997). Is attribution retraining necessary? Use of self-regulation procedures for enhancing the reading comprehension strategies of children with learning disabilities. *Journal of*

Learning Disabilities, 30(5), 503-512. Retrieved from:

<https://doi.org/10.1177/002221949703000506>

Miyake, A., & Friedman, N. P. (2012). The nature and organization of individual differences in executive functions: Four general conclusions. *Current Directions in Psychological Science*, 21, 8-14. Retrieved from:

<https://doi.org/10.1177/0963721411429458>

Miyake, A., Friedman, N. P., Emerson, M. J., Witzki, A. H., Howerter, A., & Wager, T. D. (2000). The unity and diversity of executive functions and their contributions to complex frontal lobe tasks: A latent variable analysis. *Cognitive Psychology*, 41, 49–100. Retrieved from: <https://doi.org/10.1006/cogp.1999.0734>

Miyake, A., Friedman, N. P., Emerson, M. J., Witzki, A. H., Howerter, A., & Wager, T. D. (2000). The unity and diversity of executive functions and their contributions to complex “frontal lobe” tasks: A latent variable analysis. *Cognitive Psychology*, 41(1), 49-100. doi:10.1006/cogp.1999.0734 Retrieved from: <https://doi.org/10.1006/cogp.1999.0734>

Miyake, A., Friedman, N. P., Rettinger, D. A., Shah, P., & Hegarty, M. (2001). How are visuospatial working memory, executive functioning, and spatial abilities related? A latent-variable analysis. *Journal of Experimental Psychology: General*, 130(4), 621. Retrieved from: <https://psycnet.apa.org/record/2001-05320-003>

- Moreno, A. J., Shwayder, I., & Friedman, I. D. (2016). The Function of Executive Function: Everyday Manifestations of Regulated Thinking in Preschool Settings. *Early Childhood Education Journal*, 1-11. Retrieved from: <https://doi.org/10.1007/s1064>
- Moses, L. J. (2001). Executive accounts of theory-of-mind development. *Child Development*, 72, 688–690. <https://doi.org/10.1111/1467-8624.00306>
- Mulder, H., & Cragg, L. (2014). Executive functions and academic achievement: Current research and future directions. *Infant and Child Development*, 23, 1-3. <https://doi.org/10.1002/icd.1836>
- Muneer, A., Malik, J. A., & Aftab, R. (2019). Metacognitive Self-Regulation: The Mediating Role of Emotion Oriented Coping between Positive and Negative Beliefs about Rumination amongst Pakistani Adults. *Journal of Liaquat University of Medical & Health Sciences*, 18(01), 71-76. Retrieved from: <http://121.52.154.205/index.php/jlumhs/article/view/71>
- Munoz, D. P., Broughton, J. R., Goldring, J. E., & Armstrong, I. T. (1998). Age-related performance of human subjects on saccadic eye movement tasks. *Experimental Brain Research*, 121, 391–400. Retrieved from: <https://link.springer.com/article/10.1007/s002210050473>
- Murray, K. T., & Kochanska, G. (2002). Effortful control: Factor structure and relation to externalizing and internalizing behaviors. *Journal of abnormal child*

psychology, 30(5), 503-514. Retrieved from:

<https://doi.org/10.1023/A:1019821031523>

Naeem, F., Mahmood, Z., & Saleem, S. (2014). Dyslexia a Myth or Reality:

Identification of Dyslexia in School Children of Grade Fourth and Fifth. *FWU*

Journal of Social Sciences, 8(1), 1. Retrieved from:

[http://sbbwu.edu.pk/journal/FWU_Journal_Summer2014,Vol.8,No.1/1%2078%20](http://sbbwu.edu.pk/journal/FWU_Journal_Summer2014,Vol.8,No.1/1%2078%20Dyslexia%20a%20Myth%20or%20Reality.pdf)

[Dyslexia%20a%20Myth%20or%20Reality.pdf](http://sbbwu.edu.pk/journal/FWU_Journal_Summer2014,Vol.8,No.1/1%2078%20Dyslexia%20a%20Myth%20or%20Reality.pdf)

Nayfeld, I., Fuccillo, J., & Greenfield, D. B. (2013). Executive functions in early

learning: Extending the relationship between executive functions and school

readiness to science. *Learning and Individual Differences*, 26, 81-88.

<https://doi.org/10.1016/j.lindif.2013.04.011>

Naz, A., Khan, W., Daraz, U., Hussain, M., & Khan, Q. (2011). The impacts of corporal

punishment on students' academic performance/career and personality

development up-to secondary level education in Khyber Pakhtunkhwa

Pakistan. *International Journal of Business and Social Science*, 2(12). Retrieved

from: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2082986

Nesbitt, K. T., Baker-Ward, L., & Willoughby, M. T. (2013). Executive function

mediates socio-economic and racial differences in early academic

achievement. *Early Childhood Research Quarterly*, 28(4), 774-783. Retrieved

from: <https://doi.org/10.1016/j.ecresq.2013.07.005>

- Network, E. C. C. R. (2003). Does amount of time spent in child care predict socioemotional adjustment during the transition to kindergarten?. *Child Development*, 74(4), 976-1005. <https://doi.org/10.1111/1467-8624.00582>
- Neuman, W. L., & Wiegand, B. (2000). *Criminal justice research methods: Qualitative and quantitative approaches*. Boston: Allyn and Bacon. Retrieved from: <https://www.ncjrs.gov/App/abstractdb/AbstractDBDetails.aspx?id=183919>
- Nigg, J. T. (2000). On inhibition/disinhibition in developmental psychopathology: views from cognitive and personality psychology and a working inhibition taxonomy. *Psychological Bulletin*, 126(2), 220. Retrieved from: <https://psycnet.apa.org/record/2000-03444-002>
- Nigg, J. T. (2017). Annual Research Review: On the relations among self-regulation, self-control, executive functioning, effortful control, cognitive control, impulsivity, risk-taking, and inhibition for developmental psychopathology. *Journal of child psychology and psychiatry*, 58(4), 361-383. Retrieved from: <https://doi.org/10.1111/jcpp.12675>
- Nordling, J. K., Boldt, L. J., O'Brien, J., & Kochanska, G. (2016). Effortful control mediates relations between children's attachment security and their regard for rules of conduct. *Social Development*, 25(2), 268-284. Retrieved from: <https://doi.org/10.1111/sode.12139>

Norman, D. A., & Shallice, T. (1986). Attention to action. In *Consciousness and Self-Regulation* (pp. 1-18). Springer US. Retrieved from:
<https://doi.org/10.3758/BF03196731>

O'Connor, T. G., Rutter, M., Beckett, C., Keaveney, L., & Kreppner, J. M. (2000). The effects of global severe privation on cognitive competence: Extension and longitudinal follow-up. *Child Development*, 71(2), 376-390.
<https://doi.org/10.1111/1467-8624.00151>

Obradovic, J., & Yousafzai, A. (2014, November). *Family Risk and Protective Factors for Early Cognitive Development in Disadvantaged Children Living In Rural Pakistan*. Paper presented at The Society for Research in Child Development's special topic meeting on New Conceptualizations in the Study of Parenting-At-Risk, San Diego, CA. <https://doi.org/10.1111/jcpp.12280>

Paulus, F. W., Backes, A., Sander, C. S., Weber, M., & von Gontard, A. (2015). Anxiety disorders and behavioral inhibition in preschool children: A population-based study. *Child Psychiatry & Human Development*, 46(1), 150-157.
<https://doi.org/10.1007/s10578-014-0460-8>

Pina, A., Little, M., Knight, G. P., & Silverman, W. K. (2009). Cross ethnic measurement equivalence of the RCMAS in Latino and Caucasian youth with anxiety disorders. *Journal of Personality Assessment*, 91, 58-61.
<https://doi.org/10.1080/00223890802484183>

Pisoni, D. B., & Cleary, M. (2003). Measures of working memory span and verbal rehearsal speed in deaf children after cochlear implantation. *Ear and Hearing*, 24(1 Suppl), 106S. Retrieved from:
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3434463/>

Ponitz, C. C., McClelland, M. M., Jewkes, A. M., Connor, C. M., Farris, C. L., & Morrison, F. J. (2008). Touch your toes! Developing a direct measure of behavioral regulation in early childhood. *Early Childhood Research Quarterly*, 23, 141–158. Retrieved from: <https://doi.org/10.1016/j.ecresq.2007.01.004>

Ponitz, C. C., McClelland, M. M., Matthews, J. S., & Morrison, F. J. (2009). A structured observation of behavioral self-regulation and its contribution to kindergarten outcomes. *Developmental psychology*, 45(3), 605. Retrieved from:
<https://doi.org/10.1037/a0015365>

Posner, M. I., & Rothbart, M. K. (2000). Developing mechanisms of self-regulation. *Development and psychopathology*, 12(3), 427-441. Retrieved from: <https://doi.org/10.1017/S0954579400003096>

Posner, M. I., & Rothbart, M. K. (2007). Research on attention networks as a model for the integration of psychological science. *Annu. Rev. Psychol.*, 58, 1-23. Retrieved from:
<https://www.annualreviews.org/doi/abs/10.1146/annurev.psych.58.110405.08551>

Prior, M. R. (1996). *Understanding Specific Learning Difficulties*. Psychology Press.

Quinn, P. D., & Harden, K. P. (2013). Differential changes in impulsivity and sensation seeking and the escalation of substance use from adolescence to early adulthood. *Development and psychopathology*, 25(1), 223-239. Retrieved from: <https://doi.org/10.1017/S0954579412000284>

Rabbitt, P. (1997). Introduction: Methodologies and models in the study of executive function. *Methodology of Frontal and Executive Function*, 1-38. Retrieved from: <https://ci.nii.ac.jp/naid/10011526207/>

Rabbitt, P., Lowe, C., & Shilling, V. (2001). Frontal tests and models for cognitive ageing. *European Journal of Cognitive Psychology*, 13(1-2), 5-28. Retrieved from: <https://doi.org/10.1080/09541440125722>

Rafiq, H. M. W., Fatima, T., Sohail, M. M., Saleem, M., & Khan, M. A. (2013). Parental involvement and academic achievement: A study on secondary school students of Lahore, Pakistan. *International Journal of Humanities and Social Science*, 3(8), 209-223. Retrieved from: <https://pdfs.semanticscholar.org/f0d4/f25fb83adec46dc54469ede7e5e8125f1ea7.pdf>

Raghubar, K. P., Barnes, M. A., & Hecht, S. A. (2010). Working memory and mathematics: A review of developmental, individual difference, and cognitive

approaches. *Learning and Individual Differences*, 20(2), 110-122. Retrieved from: <https://doi.org/10.1016/j.lindif.2009.10.005>

Raubenheimer, J. (2004). An item selection procedure to maximize scale reliability and validity. *SA Journal of Industrial Psychology*, 30(4), 59-64. Retrieved from: <https://journals.co.za/content/psyc/30/4/EJC89023>

Raver, C. C. (2004). Placing emotional self-regulation in sociocultural and socioeconomic contexts. *Child Development*, 75(2), 346-353. Retrieved from: <https://doi.org/10.1111/j.1467-8624.2004.00676.x>

Raver, C. C. (2012). Low income children's self-regulation in the classroom: Scientific inquiry for social change. *American Psychologist*, 67, 681-689. Retrieved from: <https://doi.org/10.1037/a0030085>

Raver, C. C., Carter, J. S., McCoy, D. C., Roy, A., Ursache, A., & Friedman, A. (2012). Testing models of children's self-regulation within educational contexts: Implications for measurement. *Advances In Child Development And Behavior*, 42, 245-270. Retrieved from: <https://doi.org/10.1016/B978-0-12-394388-0.00007-1>

Reid, M. K., & Borkowski, J. G. (1987). Causal attributions of hyperactive children: Implications for teaching strategies and self-control. *Journal of Educational Psychology*, 79(3), 296. Retrieved from: <https://psycnet.apa.org/record/1988-02886-001>

- Reivich, K., & Shatté, A. (2002). *The resilience factor: 7 essential skills for overcoming life's inevitable obstacles*. Broadway Books. Retrieved from:
<https://psycnet.apa.org/record/2002-18688-000>
- Revelle, W., & Rocklin, T. (1979). Very simple structure: An alternative procedure for estimating the optimal number of interpretable factors. *Multivariate Behavioral Research*, 14(4), 403-414. Retrieved from:
https://doi.org/10.1207/s15327906mbr1404_2
- Rimm-Kaufman, S. E., & Chiu, Y. J. I. (2007). Promoting social and academic competence in the classroom: An intervention study examining the contribution of the Responsive Classroom approach. *Psychology in the Schools*, 44(4), 397-413. Retrieved from: <https://doi.org/10.1002/pits.20231>
- Rockstroh, S., & Schweizer, K. (2001). The contributions of memory and attention processes to cognitive abilities. *The Journal of General Psychology*, 128(1), 30-42. Retrieved from: <https://doi.org/10.1080/00221300109598896>
- Roid, G. H. (2003). *Stanford-Binet Intelligence Scales* (p. 5). Itasca, IL: Riverside Publishing. Retrieved from:
<https://search.proquest.com/openview/529fb1f8fde71826657a4e64f82ad614/1?pq-origsite=gscholar&cbl=18750&diss=y>

Rose, S. A., Feldman, J. F., & Jankowski, J. J. (2012). Implications of infant cognition for executive functions at age 11. *Psychological Science*, 23(11), 1345-1355.

Retrieved from: <https://doi.org/10.1177/0956797612444902>

Rothbart, M. K. (2007). Temperament, development, and personality. *Current directions in psychological science*, 16(4), 207-212. Retrieved from:

<https://doi.org/10.1111/j.1467-8721.2007.00505.x>

Rothbart, M. K., & Ahadi, S. A. (1994). Temperament and the development of personality. *Journal of abnormal psychology*, 103(1), 55-66. Retrieved from:

<https://psycnet.apa.org/record/1994-29285-001>

Rothbart, M. K., & Bates, J. E. (1998). Temperament. In W. Damon, N. Eisenberg (Eds.), *Handbook of child psychology: Vol. 3, Social, emotional, and personality development* (pp. 105-176). Hoboken, NJ: John Wiley & Sons, Inc. Retrieved

from: <https://psycnet.apa.org/record/2005-03132-003>

Rothbart, M. K., & Bates, J. E. (2006). Temperament. *Handbook of child psychology*.

Rothbart, M. K., & Derryberry, D. (1981). Development of individual differences in temperament. In M. E. Lamb & A. L. Brown (Eds.), *Advances in developmental psychology* (Vol. 1, pp. 37-86). Hillsdale, NJ: Erlbaum. Retrieved from:

<https://ci.nii.ac.jp/naid/10029064846/>

Rothbart, M. K., Ahadi, S. A., & Hershey, K. L. (1994). Temperament and social behavior in childhood. *Merrill-Palmer Quarterly* (1982-), 21-39. Retrieved from: <https://www.jstor.org/stable/pdf/23087906.pdf?seq=1>

Rothbart, M. K., Ahadi, S. A., Hershey, K. L., & Fisher, P. (2001). Investigations of temperament at three to seven years: The Children's Behavior Questionnaire. *Child development*, 72(5), 1394-1408. Retrieved from: <https://doi.org/10.1111/1467-8624.00355>

Rothbart, M. K., Ahadi, S. A., Hershey, K. L., & Fisher, P. (2001). Investigations of temperament at three to seven years: The Children's Behavior Questionnaire. *Child development*, 72(5), 1394-1408. Retrieved from: <https://doi.org/10.1111/1467-8624.00355>

Rothbart, M. K., Ellis, L. K., & Posner, M. I. (2004). Temperament and self-regulation. In R. F. Baumeister & K. D. Vohs (Eds.), *Handbook of self-regulation: Research, theory, and applications* (pp. 357–370). New York: Guilford. Retrieved from: <https://psycnet.apa.org/record/2004-00163-000>

Rothbart, M. K., Ellis, L. K., Rosario Rueda, M., & Posner, M. I. (2003). Developing mechanisms of temperamental effortful control. *Journal of Personality*, 71(6), 1113-1144. Retrieved from: <https://doi.org/10.1111/1467-6494.7106009>

Röthlisberger, M., Neuenschwander, R., Cimeli, P., Michel, E., & Roebbers, C. M. (2012). Improving executive functions in 5-and 6-year-olds: Evaluation of a

small group intervention in prekindergarten and kindergarten children. *Infant and Child Development*, 21(4), 411-429. <https://doi.org/10.1002/icd.752>

Rowling, L. (2006). Adolescents and emerging adulthood (12-17 years and 18-24 years). In A. Cattan & S. Tilford (Eds.), *Mental health promotion: A lifespan approach*. (pp. 100-136). New York: McGraw-Hill.

Rueda, M. R., Posner, M. I., & Rothbart, M. K. (2005). The development of executive attention: Contributions to the emergence of self-regulation. *Developmental Neuropsychology*, 28(2), 573-594. Retrieved from: https://doi.org/10.1207/s15326942dn2802_2

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American psychologist*, 55(1), 68. Retrieved from: <https://psycnet.apa.org/buy/2000-13324-007>

Sabol, T. J., & Pianta, R. C. (2012). Patterns of school readiness forecast achievement and socioemotional development at the end of elementary school. *Child development*, 83(1), 282-299. <https://doi.org/10.1111/j.1467-8624.2011.01678.x>

Salthouse, T. A., Atkinson, T. M., & Berish, D. E. (2003). Executive functioning as a potential mediator of age-related cognitive decline in normal adults. *Journal of Experimental Psychology: General*, 132(4), 566. Retrieved from: <https://doi.org/10.1111/j.1467-8624.2011.01678.x>

- Salthouse, T. A., Fristoe, N., McGuthry, K. E., & Hambrick, D. Z. (1998). Relation of task switching to speed, age, and fluid intelligence. *Psychology and Aging, 13*(3), 445. Retrieved from: <https://psycnet.apa.org/record/1998-10934-010>
- Scheres, A., Oosterlaan, J., Geurts, H., Morein-Zamir, S., Meiran, N., Schut, H., et al. (2004). Executive functioning in boys with ADHD: Primarily an inhibition deficit. *Archives of Clinical Neuropsychology, 19*, 569–594. Retrieved from: <https://doi.org/10.1016/j.acn.2003.08.005>
- Schunk, D. H., & Ertmer, P. A. (2000). Self-regulation and academic learning: Self-efficacy enhancing interventions. Retrieved from: <https://doi.org/10.1016/B978-012109890-2/50048-2>
- Seidman, L. J., Biederman, J., Monuteaux, M. C., Weber, W., & Faraone, S. V. (2000). Neuropsychological functioning in no referred siblings of children with attention deficit/hyperactivity disorder. *Journal of Abnormal Psychology, 109*(2), 252. Retrieved from: <https://psycnet.apa.org/record/2000-15700-009>
- Sergeant, J. A., Geurts, H., & Oosterlaan, J. (2002). How specific is a deficit of executive functioning for attention-deficit/hyperactivity disorder?. *Behavioral Brain Research, 130*(1), 3-28. Retrieved from: [https://doi.org/10.1016/S0166-4328\(01\)00430-2](https://doi.org/10.1016/S0166-4328(01)00430-2)

- Sesma, H. W., Mahone, E. M., Levine, T., Eason, S. H., & Cutting, L. E. (2009). The contribution of executive skills to reading comprehension. *Child Neuropsychology*, 15(3), 232-246. Retrieved from: <https://doi.org/10.1080/09297040802220029>
- Shaheen, A., Nadeem, M., & Ullah, S. (2012). P-377-Factors governing cognitive function of primary school children in pakistan. *European Psychiatry*, 27, 1. Retrieved from: [https://doi.org/10.1016/S0924-9338\(12\)74544-3](https://doi.org/10.1016/S0924-9338(12)74544-3)
- Shallice, T. (2002). Fractionation of the supervisory system. *Principles of Frontal Lobe Function*, 261-277.
- Shallice, T., Burgess, P., & Robertson, I. (1996). The domain of supervisory processes and temporal organization of behaviour [and discussion]. *Philosophical Transactions of the Royal Society of London B: Biological sciences*, 351(1346), 1405-1412. Retrieved from: <https://doi.org/10.1098/rstb.1996.0124>
- Sheskin, D. J. (2003). *Handbook of Parametric and Nonparametric Statistical Procedures*. crc Press. Retrived from: <https://content.taylorfrancis.com/books/download?dac=C2014-0-34594-0&isbn=9781420036268&format=googlePreviewPdf>
- Shonkoff, J. P., & Phillips, D. A. (2000). *From neurons to neighborhoods: The science of early childhood development*. National Academy Press, 2101 Constitution

Avenue, NW, Lockbox 285, Washington, DC 20055. Retrieved from:
<https://eric.ed.gov/?id=ED446866>

Shores, R. E., & Wehby, J. H. (1999). Analyzing the classroom social behavior of students with EBD. *Journal of Emotional and Behavioral Disorders*, 7(4), 194-199. Retrieved from: <https://doi.org/10.1177/106342669900700401>

Siddiqui, N., & Gorard, S. (2017). Comparing government and private schools in Pakistan: The way forward for universal education. *International Journal of Educational Research*, 82, 159-169. Retrieved from:
<https://doi.org/10.1016/j.ijer.2017.01.007>

Siegel, L. S., & Ryan, E. B. (1989). The development of working memory in normally achieving and subtypes of learning disabled children. *Child Development*, 973-980. Retrieved from: <https://www.jstor.org/stable/1131037?seq=1>

Sikora, D. M., Haley, P., Edwards, J., & Butler, R. W. (2002). Tower of London test performance in children with poor arithmetic skills. *Developmental Neuropsychology*, 21(3), 243-254. Retrieved from:
https://doi.org/10.1207/S15326942DN2103_2

Simon, H. A. (1975). The functional equivalence of problem solving skills. *Cognitive Psychology*, 7, 268–288. Retrieved from: [https://doi.org/10.1016/0010-0285\(75\)90012-2](https://doi.org/10.1016/0010-0285(75)90012-2)

Simonds, J. (2006). *The role of reward sensitivity and response execution in childhood extraversion* (Doctoral dissertation, University of Oregon). Retrieved from:

http://research.bowdoin.edu/rothbart-temperament-questionnaires/files/2016/09/Simonds_Dissertation_2006.pdf

Simonds, J., & Rothbart, M. K. (2004, October). The Temperament in Middle Childhood Questionnaire (TMCQ): A computerized self-report instrument for ages 7–10. In *Poster Sess Present Occas Temperament Conf Athens, GA*.

Retrieved from: https://research.bowdoin.edu/rothbart-temperament-questionnaires/files/2016/09/TMCQ_Poster_Oct04.pdf

Simonds, J., & Rothbart, M. K. (2006). *Temperament in Middle Childhood Questionnaire*. Manuscript in Preparation.

Simonds, J., Kieras, J. E., Rueda, M. R., & Rothbart, M. K. (2006). Executive attention, effortful control, and emotional regulation in 7-10 year old children. Manuscript submitted for publication.

Smith, E. R. (1998). Mental representation and memory. In D. Gilbert, S. Fiske & G. Lindzey (Eds.), *Handbook of social psychology* (4th ed., Vol. 1, pp. 391–445).

Smokowski, P. R., Rose, R.A., & Bacallao, M. (2010). Influence of risk factors and cultural assets on Latino adolescents' trajectories of self-esteem and internalizing symptoms. *Child Psychiatry and Human Development*, 41,133-155. Retrieved from: <https://doi.org/10.1007/s10578-009-0157-6>

Social, P. (2015). Living Standards Measurement Survey (PSLM) 2013–14 National.

Sonuga-Barke, E. J., Dalen, L., Daley, D., & Remington, B. (2002). Are planning, working memory, and inhibition associated with individual differences in preschool ADHD symptoms? *Developmental Neuropsychology*, 21(3), 255-272.
Retrieved from: https://doi.org/10.1207/S15326942DN2103_3

Spielberger, C. D., Sarason, I. G., Strelau, J., & Brebner, J. M. (2014). *Stress and anxiety*. Taylor & Francis. Retrieved from:
<https://doi.org/10.4324/9781315800851>

Steinmayr, R., Meißner, A., Weidinger, A. F., & Wirthwein, L. (2014). Academic Achievement. OxfordBibliographies.

Sternberg, R. J. (1988). *The Triarchic Mind: A New Theory of Human Intelligence*. Viking Pr.

Sternberg, R. J., & Grigorenko, E. L. (Eds.). (2014). *Environmental Effects on Cognitive Abilities*. Psychology Press. Retrieved from: <https://psycnet.apa.org/record/1997-04731-002>

Sternberg, R. J., Conway, B. E., Ketron, J. L., & Bernstein, M. (1981). People's conceptions of intelligence. *Journal of Personality and Social Psychology*, 41(1), 37. Retrieved from: <https://psycnet.apa.org/record/1982-05773-001>

- Stevens, J., Quittner, A. L., Zuckerman, J. B., & Moore, S. (2002). Behavioral inhibition, self-regulation of motivation, and working memory in children with attention deficit hyperactivity disorder. *Developmental Neuropsychology*, 21(2), 117-139. Retrieved from: https://doi.org/10.1207/S15326942DN2102_1
- Stifter, C. A., Spinrad, T., & Braungart-Rieker, J. (1999). Toward a developmental model of child compliance: The role of emotion regulation in infancy. *Child Development*, 70(1), 21-32. Retrieved from: <https://doi.org/10.1111/1467-8624.00003>
- Stroop, J. R. (1935). Studies of interference in serial verbal reactions. *Journal of Experimental Psychology*, 18(6), 643. Retrieved from: <https://psycnet.apa.org/record/1936-01863-001>
- Stuss, D. T., Binns, M. A., Murphy, K. J., & Alexander, M. P. (2002). Dissociation within the anterior attentional system: Effects of task complexity and irrelevant information on reaction time speed and accuracy. *Neuropsychology*, 16(4), 500. Retrieved from: <https://psycnet.apa.org/record/2002-18399-006>
- Subhan, S. E., & Bashir, J.I. (2010). Translation and Cross-Cultural Validation of Early Adolescence Temperament Questionnaire—Revised. (Master's Thesis). Retrieved from <http://www.digitallibrary.edu.pk/uniofkhi.html>

- Sulik, M. J. (2017). Introduction to the special section on executive functions and externalizing symptoms. *Journal of abnormal child psychology*, 45(8), 1473-1475. Retrieved from: <https://doi.org/10.1007/s10802-017-0349-7>
- Swanson, H. L. (1999). *Interventions for Students with Learning Disabilities: A Meta-Analysis of Treatment Outcomes*. Guilford Press.
- Swanson, H. L. (2006). Cross-sectional and incremental changes in working memory and mathematical problem solving. *Journal of Educational Psychology*, 98(2), 265. Retrieved from: <https://psycnet.apa.org/record/2006-06234-002>
- Swanson, H. L., & Ashbaker, M. H. (2000). Working memory, short-term memory, speech rate, word recognition and reading comprehension in learning disabled readers: Does the executive system have a role?. *Intelligence*, 28(1), 1-30. Retrieved from: [https://doi.org/10.1016/S0160-2896\(99\)00025-2](https://doi.org/10.1016/S0160-2896(99)00025-2)
- Swanson, H. L., & Jerman, O. (2007). The influence of working memory on reading growth in subgroups of children with reading disabilities. *Journal of Experimental Child Psychology*, 96(4), 249-283. Retrieved from: <https://doi.org/10.1016/j.jecp.2006.12.004>
- Syed, E. U., Hussein, S. A., & Mahmud, S. (2007). Screening for emotional and Behavioral problems amongst 5- 11 years old school children in Karachi, Pakistan. *Social Psychiatry Epidemiology*, 42, 421-427. Retrieved from: <https://doi.org/10.1007/s00127-007-0188-x>

Tabachnick, B. G., Fidell, L. S., & Osterlind, S. J. (2001). Using multivariate statistics.

Tang, Y. Y., & Posner, M. I. (2009). Attention training and attention state training. *Trends in cognitive sciences*, 13(5), 222-227. Retrieved from: <https://doi.org/10.1016/j.tics.2009.01.009>

Tariq, M. C. (2010). Validation of procedures for identification of the children with specific learning difficulties in mainstream classrooms. *Bulletin of Education and Research*, 32(2). Retrieved from: <http://pu.edu.pk/images/journal/pesr/PDF-FILES/6-Tariq%20Mahmood%20Ch..pdf>

Tariq, S. R., Batool, I., & Khan, T. S. (2013). Curiosity, Self-Regulation and Academic Achievement among Undergraduate Students. *Pakistan Journal of Social and Clinical Psychology*, 11(2), 28-35. Retrieved from: <http://www.gcu.edu.pk/FullTextJour/PJSCS/2013b/5.MsIffat.pdf>

Tariq, S., & Noor, S. (2012). Impact of Working Memory on Academic Achievement of University Science Students in Punjab, Pakistan. *Journal of Education and Practice*, 3(2), 47. Retrieved from: http://www.academia.edu/download/13141774/11.Impact_of_Working_Memory_on_Academic_Achievement_of_University_Science_Students_in_Punjab_Pakistan.pdf

Terman, L. M., & Merrill, M. A. (1960). *Stanford-Binet Intelligence Scale*: Manual for the third revision, Form LM. Retrieved from:

<https://psycnet.apa.org/record/1960-06751-000>

Teuber, H. L., Battersby, W. S., & Bender, M. B. (1955). Changes in visual searching performance following cerebral lesions. *American Journal of Physiology*, 159, 592–600.

Thompson, R. A. (2008). *Early Attachment And Later Development: Familiar Questions, New Answers*. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment* (2nd Ed.) (pp. 348-365). Retrieved from:

<https://psycnet.apa.org/record/2008-13837-016>

Total, N. K. (2019, June). Insights into the roles of attention, error detection, and noradrenergic neuromodulation during learning using a electrophysiology-compatible rodent set-shifting task. In *Universität Heidelberg: Institut für Physiologie und Pathophysiologie: SFB 1134*. Retrieved from:

https://pure.mpg.de/pubman/faces/ViewItemOverviewPage.jsp?itemId=item_3055249

Triandis, H. C. (1972). *The analysis of subjective culture*. New York: John Wiley & Sons. Retrieved from: <https://psycnet.apa.org/record/1973-02304-000>

Triandis, H.C. (1993). Collectivism and individualism as cultural syndromes. *Cross-Cultural Research*, 27, 155-180. Retrieved from:
<https://doi.org/10.1177/106939719302700301>

Trochim, W. M. (2006). *The research methods knowledge base* (2nd ed.). Retrieved from <http://www.socialresearchmethods.net/kb/> New York: McGraw-Hill.

Ursache, A., Blair, C., & Raver, C. C. (2012). The promotion of self-regulation as a means of enhancing school readiness and early achievement in children at risk for school failure. *Child Development Perspectives*, 6(2), 122-128.
<https://doi.org/10.1111/j.1750-8606.2011.00209.x>

Uttl, B., & Graf, P. (1997). Color-Word Stroop test performance across the adult life span. *Journal of Clinical and Experimental Neuropsychology*, 19(3), 405-420.
Retrieved from: <https://doi.org/10.1080/01688639708403869>

Valiente, C., Eisenberg, N., Fabes, R. A., Shepard, S. A., Cumberland, A. J., & Losoya, S. H. (2004). Prediction of children's empathy-related responding from their effortful control and parents' expressivity. *Developmental Psychology*, 40, 911–926. Retrieved from: <https://psycnet.apa.org/record/2004-20098-002>

Valiente, C., Eisenberg, N., Smith, C. L., Reiser, M., Fabes, R. A., Losoya, S., ... & Murphy, B. C. (2003). The relations of effortful control and reactive control to children's externalizing problems: A longitudinal assessment. *Journal of*

personality, 71(6), 1171-1196. Retrieved from: <https://doi.org/10.1111/1467-6494.7106011>

Valiente, C., Eisenberg, N., Spinrad, T. L., Reiser, M., Cumberland, A. J., Losoya, S. H., et al. (2006). Relations among mothers' expressivity, children's effortful control, and their problem behaviors: A four-year longitudinal study. *Emotion*, 6, 459–472. Retrieved from: <https://psycnet.apa.org/record/2006-10747-011>

Valiente, C., Lemery-Chalfant, K., & Castro, K. S. (2007). Children's effortful control and academic competence. Mediation through school liking. *Merrill-Palmer Quarterly*, 53, 1–25. Retrieved from: <https://www.jstor.org/stable/23096289>

Valiente, C., Lemery-Chalfant, K., & Swanson, J. (2010). Prediction of kindergartners' academic achievement from their effortful control and emotionality: Evidence for direct and moderated relations. *Journal of Educational Psychology*, 102(3), 550-560. doi: 10.1037/a0018992. Retrieved from: <https://psycnet.apa.org/record/2010-15712-002>

Valiente, C., Lemery-Chalfant, K., Swanson, J., & Reiser, M. (2008). Prediction of children's academic competence from their effortful control, relationships, and classroom participation. *Journal of Educational Psychology*, 100, 67–77. Retrieved from: <https://psycnet.apa.org/record/2008-01796-005>

Van der Sluis, S., de Jong, P. F., & van der Leij, A. (2004). Inhibition and shifting in children with learning deficits in arithmetic and reading. *Journal of Experimental*

Child Psychology, 87(3), 239-266. Retrieved from:

<https://doi.org/10.1016/j.jecp.2003.12.002>

Van der Sluis, S., van der Leij, A., & de Jong, P. F. (2005). Working memory in Dutch children with reading-and arithmetic-related LD. *Journal of Learning*

Disabilities, 38(3), 207-221. Retrieved from:

<https://doi.org/10.1177/00222194050380030301>

Vandenbroucke, L., Verschueren, K., & Baeyens, D. (2017). The development of executive functioning across the transition to first grade and its predictive value for academic achievement. *Learning and Instruction*, 49, 103-112. Retrieved from: <https://doi.org/10.1016/j.learninstruc.2016.12.008>

Varela, R. E., & Hensley-Maloney, L. (2009). The influence of culture on anxiety in Latino youth: A review. *Clinical Child and Family Psychology Review*, 12, 217-233. Retrieved from: <https://doi.org/10.1007/s10567-009-0044-5>

Verburgh, L., Königs, M., Scherder, E. J., & Oosterlaan, J. (2013). Physical exercise and executive functions in preadolescent children, adolescents and young adults: a meta-analysis. *British Journal of Sports Medicine*, bjsports-2012. Retrieved from: <http://dx.doi.org/10.1136/bjsports-2012-091441>

Viñas, F., González, M., Malo, S., García, Y., & Casas, F. (2014). Temperament and personal wellbeing in a sample of 12 to 16 year-old adolescents. *Applied*

Research in Quality of Life, 9(2), 355-366. Retrieved from:

<https://doi.org/10.1007/s11482-013-9242-x>

Vohs, K. D., & Baumeister, R. F. (Eds.). (2016). *Handbook of self-regulation: Research, theory, and applications*. Guilford Publications.

Wang, Y., & Ollendick, T.H. (2001). A cross-cultural and developmental analysis of self-esteem in Chinese and Western children. *Clinical Child and Family Psychology Review*, 4, 253-271. Retrieved from:

<https://doi.org/10.1023/A:1017551215413>

Wang, Z., & Deater-Deckard, K. (2013). Resilience in gene–environment transactions.

In *Handbook of resilience in children* (pp. 57-72). Springer, Boston, MA.

Retrieved from: https://doi.org/10.1007/0-306-48572-9_4

Wechsler, D. (1981). *WAIS-R Manual: Wechsler Adult Intelligence Scale-Revised*.

Psychological Corporation.

Weinstein, B. (1941). Matching-from-sample by rhesus monkeys and by children.

Journal of Comparative Psychology, 31, 195–213. Retrieved from:

<https://psycnet.apa.org/record/1941-02149-001>

Welsh, M. C., & Pennington, B. F. (1988). Assessing frontal lobe functioning in children: Views from developmental psychology. *Developmental Neuropsychology*, 4(3), 199-230. Retrieved from:

Developmental Neuropsychology, 4(3), 199-230. Retrieved from:

<https://doi.org/10.1080/87565648809540405>

Welsh, M. C., Pennington, B. F., & Groisser, D. B. (1991). A normative developmental study of executive function: A window on prefrontal function in children.

Developmental Neuropsychology, 7(2), 131–149. Retrieved from:

<https://doi.org/10.1080/87565649109540483>

West, R., & Baylis, G. C. (1998). Effects of increased response dominance and contextual disintegration on the Stroop interference effect in older adults.

Psychology and Aging, 13(2), 206. Retrieved from:

<https://psycnet.apa.org/buy/1998-02632-004>

Wiebe, S. A., Espy, K. A., & Charak, D. (2008). Using confirmatory factor analysis to understand executive control in preschool children: I. Latent

structure. *Developmental psychology*, 44(2), 575. Retrieved from:

<https://psycnet.apa.org/record/2008-02379-023>

Willcutt, E. G., Pennington, B. F., Boada, R., Ogline, J. S., Tunick, R. A., Chhabildas, N. A., & Olson, R. K. (2001). A comparison of the cognitive deficits in reading

disability and attention-deficit/hyperactivity disorder. *Journal of Abnormal*

Psychology, 110(1), 157. Retrieved from: [https://psycnet.apa.org/record/2001-](https://psycnet.apa.org/record/2001-17627-017)

17627-017

Willoughby, M., Kupersmidt, J., Voegler-Lee, M., & Bryant, D. (2011). Contributions of hot and cool self-regulation to preschool disruptive behavior and academic

achievement. *Developmental Neuropsychology*, 36(2), 162-180. Retrieved from:

<https://www.tandfonline.com/doi/abs/10.1080/87565641.2010.549980>

- Wimmer, H., & Perner, J. (1983). Beliefs about beliefs: Representation and constraining function of wrong beliefs in young children's understanding of deception. *Cognition*, 13, 103–128. Retrieved from: [https://doi.org/10.1016/0010-0277\(83\)90004-5](https://doi.org/10.1016/0010-0277(83)90004-5)
- Womack, S. R., Taraban, L., Shaw, D. S., Wilson, M. N., & Dishion, T. J. (2019). Family turbulence and child internalizing and externalizing behaviors: Moderation of effects by race. *Child development*, 90(6), e729-e744. <https://doi.org/10.1111/cdev.13103>
- Wu, K. K., Anderson, V., & Castiello, U. (2002). Neuropsychological evaluation of deficits in executive functioning for ADHD children with or without learning disabilities. *Developmental Neuropsychology*, 22(2), 501-531. Retrieved from: https://doi.org/10.1207/S15326942DN2202_5
- Yahya, T, & Bashir, J.I. (2015). Translation and Cross-cultural validation of Emotion Expression Scale for Children (EESC): The EESC. (Master's Thesis) Retrieved from <http://www.digitallibrary.edu.pk/uniofkhi.html>
- Yamane, Taro. 1967. *Statistics, an Introductory Analysis*, 2nd Ed., New York: Harper and Row.
- Yeo, R. A., Martinez, D., Pommy, J., Ehrlich, S., Schulz, S. C., Ho, B. C., ... & Calhoun, V. D. (2014). The impact of parent socio-economic status on executive functioning and cortical morphology in individuals with schizophrenia and

healthy controls. *Psychological Medicine*, 44(06), 1257-1265.

<https://doi.org/10.1017/S0033291713001608>

Yin, R. K. (1994). *Case study research: Design and methods* (2nd ed.). Thousand Oaks, Calif: Sage. <https://doi.org/10.1177/109821409401500309>

Yong, A. G., & Pearce, S. (2013). A beginner's guide to factor analysis: Focusing on exploratory factor analysis. *Tutorials in Quantitative Methods for Psychology*, 9(2), 79-94.

Ysseldyke, J. E., & Reschly, D. J. (2014). The evolution of school psychology: Origins, contemporary status, and future directions. In P. L. Harrison & A. Thomas (Eds.), *Best practices in school psychology: Data-based and collaborative decision making* (pp. 71-84). Bethesda, MD: National Association of School Psychologists.

Zelazo, P. D., & Carlson, S. M. (2012). Hot and cool executive function in childhood and adolescence: Development and plasticity. *Child Development Perspectives*, 6(4), 354-360. Retrieved from: <https://doi.org/10.1111/j.1750-8606.2012.00246.x>

Zelazo, P. D., & Müller, U. (2002). Executive Function in Typical and Atypical Development. <https://doi.org/10.1002/9780470996652.ch20>

Zelazo, P. D., Carter, A., Reznick, J. S., & Frye, D. (1997). Early development of executive function: A problem-solving framework. *Review of General*

Psychology, 1(2), 198. Retrieved from: <https://doi.org/10.1037/1089-2680.1.2.198>

Zelazo, P. D., Müller, U., Frye, D., Marcovitch, S., Argitis, G., Boseovski, J., ... & Carlson, S. M. (2003). The development of executive function in early childhood. *Monographs of the society for research in child development*, i-151. Retrieved from: <https://www.jstor.org/stable/1166202>

Zhou, Q., Hofer, C., Eisenberg, N., Reiser, M., Spinrad, T., & Fabes, R. (2007). The developmental trajectories of attention focusing, attentional and behavioral persistence, and externalizing problems during school-age years. *Developmental Psychology*, 43, 369–385. Retrieved from: <https://psycnet.apa.org/record/2007-02739-008>



Appendix A

Informed Consent Form

Title of Project: Mediating role of internalizing and externalizing behaviors between temperamental effortful control and academic performance: evidence from Pakistan.

Principal Invigilator: Alishba Hania (+923414486350, alishba_hania92@hotmail.com)

You are being asked to participate in a research study. Before you give your consent to volunteer, it is important that you read the following information to be sure you understand what you will be asked to do.

Purpose of The Study

This research study is designed to examine factors that might influence academic performance by looking into mediating role of internalizing and externalizing behaviors between temperamental effortful control and academic performance.

Procedures

Data will be gathered through questionnaire, which consists of questions about internalizing, externalizing behaviors, temperamental effortful control and academic performance of child. It will take approximately 20 minutes to complete.

Discomforts and Risks

Your participation in this research project is completely voluntary and you may refuse to participate at any time. There are no known risks to participation beyond those encountered in everyday life. Some of the questions are personal and might cause discomfort.

Confidentiality

Your participation in this research is confidential. The data collection methods do not ask for any information that would identify who the responses belong to. In the event of any publication or presentation resulting from the research, no personally identifiable information will be shared because your name is in no way linked to your responses.

Voluntary Participation

Your decision to be in this research is voluntary. If you agree to participate in this project, please answer the questions on the questionnaire as best you can.

Benefits of Your Participation in the Study

Although you may not directly benefit from taking part in this study, however the outcomes of this study could assist management and practitioners in the educational setting, in designing and implementing relevant measures to better understand the importance of internalizing, externalizing behaviors, temperamental effortful control and academic performance among children.

Participant:

Name of Participant

Signature

Date

Researcher:

Name of Researcher

Signature

Date



UUM
Universiti Utara Malaysia

Appendix B

Instruments



Dear Participant,

This project is being conducted by Ms. Alishba Hania as part of a Doctor of Philosophy program at University Utara Malaysia under the supervision of Dr. Azlizamani Zubir Salim from the School of Applied Psychology, Social Work and Policy, University Utara Malaysia, Malaysia. By giving twenty minutes of your valuable time, you are providing information that is pertinent to the study. Your answers are very important to the accuracy of the study. To this end, please find enclosed the Informed Consent Form, Personal Data Sheet and Questionnaire for your attention and further action.

Questions regarding the doctoral research, can be directed to the researcher:

Alishba Hania (+923414486350, alishba_hania92@hotmail.com)

Thank you for your cooperation in this important endeavour.

Regards,

Ms. Alishba Hania

Section A: Demographic Information

For each question check the response option that best describe you or write your response as appropriate:

Gender

☐ Boys ☐ Girls

Class

☐ Three ☐ Four ☐ Five

Age: _____

Number of Siblings: _____

Father's education:

☐ Uneducated ☐ Primary ☐ Secondary ☐ Intermediate ☐ Graduate
☐ Masters

Mother's education:

☐ Uneducated ☐ Primary ☐ Secondary ☐ Intermediate ☐ Graduate
☐ Masters

Mother's profession

☐ House wife ☐ Working

Family systems

☐ Nuclear ☐ Combined

SECTION B:

TEMPERAMENTAL EFFORTFUL CONTROL (Parent's Performance)

INTERNALIZING BEHAVIORS. (Parent's Performance)

EXTERNALIZING BEHAVIORS. (Self Report)



Universiti Utara Malaysia

TEMPERAMENTAL EFFORTFUL CONTROL (Parent's Performance)

بچے کا نام _____ بچے کی عمر _____ تاریخ پیدائش _____ جنس: لڑکا / لڑکی (ایک پر نشان لگائیں)

آپ کا بچے سے رشتہ: ماں / باپ / کوئی اور _____

ہدایت: برائے مہربانی شروع کرنے سے پہلے بغور پڑھیے۔ اگلے صفحات پر آپ کچھ جملے پڑھیں گے جو مختلف حالات میں بچوں کے رد عمل کو ظاہر کرتے ہیں۔ ہم چاہیں گے کہ آپ ہمیں مختلف حالات میں اپنے بچے کا ممکنہ رد عمل بتائیں۔ بے شق رد عمل کا کوئی درست یا غلط طریقہ نہیں ہوتا اور بچے اپنے رد اعمال کے اظہار میں ایک دوسرے سے مختلف ہوتے ہیں اور ہم اسی فرق کے بارے میں جاننا چاہتے ہیں۔

برائے مہربانی ہر جملے کو بغور پڑھیے اور پچھلے 6 ماہ کو ذہن میں رکھتے ہوئے فیصلہ کریں کہ کیا یہ آپ کے بچے کے رد عمل کی صحیح ترجمانی کر رہا ہے یا نہیں مندرجہ ذیل بیانہ استعمال کرتے ہوئے بتائے کہ ہر جملہ آپ کے بچے کے رویے کو کتنا درست بیان کرتا ہے۔

بالکل نہیں۔ تقریباً ہمیشہ آپ کے بچے کے بارے میں غلط ہے

بہت کم۔ زیادہ تر آپ کے بچے کے متعلق غلط ہے

ایک حد تک۔ آپ کے بچے کے متعلق کبھی درست اور کبھی غلط ہے

بہت زیادہ۔ آپ کے بچے کے متعلق زیادہ تر درست ہے

ہمیشہ۔ آپ کے بچے کے متعلق تقریباً ہمیشہ درست ہے

اگر آپ کسی بیان کا جواب اس لئے نہیں دے پائے کیونکہ آپ نے بچے کو اس صورتحال میں کبھی نہیں دیکھا مثلاً جملہ، آپ کے گانا گانے پر بچے کا رد عمل کے بارے میں ہے اور آپ نے کبھی گانا نہیں سنایا تو 0 (سفر) پر دائرہ لگائیں۔ برائے مہربانی ہر جملے کے آگے کسی ایک نمبر پر نشان لگائیے۔

0	بالکل نہیں	بہت کم	ایک حد تک	بہت زیادہ	ہمیشہ
1.	F1	وقت پر کام ختم کرنے میں مشکل پیش آتی ہے Has a hard time finishing things in time			
2.	F1	کسی سے عدم اتفاق کی صورت میں فوری طور پر مسئلہ کا حل نکالنے کی کوشش کرتا / کرتی ہے If having a problem with someone, usually tries to deal with it right away.			
3.	F1	اکثر ہوم ورک شروع کرنے سے پہلے خود کو بلا ضرورت کاموں میں مصروف کر لیتا ہے Usually does something fun for a while before starting his/her homework, even though he/she is not supposed to			
4.	F1	جب اسے کوئی کام کہا جاتا ہے تو اسے پسند نہ کرنے کے باوجود بھی کرنے لگتا / لگتی ہے When asked to do something, does it right away, even if he/she doesn't want to			
5.	F1	اکثر اپنا ہوم ورک وقت سے پہلے مکمل کر لیتا / لیتی ہے			

						Usually finishes his/her homework before it is due		
						اگر ہوم ورک مشکل یا وقت طلب ہو تو بلا تاخیر شروع کر دیتا/ دیتی ہے Usually gets started right away on difficult assignments	6.	F1
						اکثر کاموں کو آخری وقت تک ملتوی کرتا رہتا/ رہتی ہے Usually puts off working on a project until it is due	7.	F1
						مشکل کام پر خاص توجہ مرکوز کرنے کو آسان سمجھتا/ سمجھتی ہے Finds it easy to really concentrate on a problem	8.	F2
						دوران گفتگو کسی خلل یا مداخلت کی صورت میں اگلی بات بھول جاتا/ جاتی ہے When interrupted or distracted, forgets what he/she was about to say	9.	F2
						آس پاس شور کا ماحول ہو تو پڑھنے میں دشواری پیش آتی ہے Has a difficult time tuning out background noise and concentrating when trying to study	10.	F2
						آس پاس ہونے والی معمولی باتوں پر بھی اچھی طرح دھیان رکھتا/ رکھتی ہے Is good at keeping track of several different things that are happening around him/her	11.	F2
						اکثر ایک کام مکمل کئے بغیر ہی دوسرے میں لگ جاتا/ جاتی ہے Is often in the middle of doing one thing and then goes off to do something else	12.	F2
						جب کسی کام کو انجام دینے کا طریقہ بتایا جا رہا ہو تو غور سے سنتا ہے Pays close attention when someone tells him/her how to do something	13.	F2
						پر جوش ہونے پر بات کرنے کے لئے اپنی باری کا انتظار کرنے میں مشکل پیش آتی ہے Has a hard time waiting his/her turn to speak when excited	14.	F3
						وقت سے پہلے تحفہ کھول لیتا ہے Open presents before he/she is supposed to	15.	F3
						خود کو ایسے کام سے روکنا مشکل ہوتا ہے جس کو کرنے سے منع کیا گیا ہو	16.	F3

						Is more likely to do something, he/she shouldn't do the more he/she tries to stop him/herself		
						اپنے آپ کو غیر مناسب اوقات میں ہنسنے سے روک سکتا ہے Is able to stop him/herself from laughing at inappropriate times	17.	F3
						خود سے بنائے ہوئے منصوبوں کو انجام تک پہنچا سکتا ہے Is usually able to stick with his/her plans and goals	18.	F3



UUM
Universiti Utara Malaysia

INTERNALIZING BEHAVIORS. (Parent's Performa)

ذیل میں چند مسائل کا ذکر ہے جو عام طور پر اسکول کے بچوں کو درپیش ہوتے ہیں۔ مندرجہ ذیل جملوں کو غور سے پڑھیے اور بتائیں کہ یہ آپ کے لئے کس حد تک پریشانی کا باعث ہیں۔ یہ بتانے کے لئے "کبھی نہیں، بہت کم، بعض اوقات، اکثر" میں سے کسی ایک پر نشان لگائیں۔

ہمیشہ	بہت زیادہ	ایک حد تک	بہت کم	بالکل نہیں			
					دوسرے بچوں کی چھوٹی چھوٹی باتوں سے تنگ ہو جاتا ہے / جاتی ہے Is annoyed by little things other kids do	F1	1.
					دوسروں کا مذاق اڑاتا ہے / اڑاتی ہے Makes fun of how other people look	F3	2.
					کبھی کبھی خوشی کے موقعوں پر بھی اداس محسوس ہوتا ہے / ہوتی ہے Sometimes seems sad even when he/she should be enjoying her/himself	F2	3.
					جب کسی من پسند کام کو کرنے سے روکا جائے تو غصہ ہو جاتا ہے / جاتی ہے Gets irritated when he/she has to stop doing something he/she is enjoying	F1	4.
					غصہ میں دروازہ بہت زور سے بند کرتا ہے / کرتی ہے Slams doors when angry	F3	5.
					جب بہت سی چیزیں مزاج کے خلاف ہو رہی ہوں تب بھی اداس نہیں ہوتا / ہوتی Is hardly ever sad, even when lots of things are going wrong	F2	6.
					اکثر غلطیوں کا الزام دوسروں پر لگانے کی کوشش کرتا ہے / کرتی ہے Tends to try to blame mistakes on someone else	F3	7.
					جب لوگ اس کی بات سے اتفاق نہیں کرتے تو بہت برا محسوس کرتا ہے Hates it when people don't agree with him/her	F1	8.
					بہت زیادہ غصہ میں ہو تو کسی پر ہاتھ بھی اٹھا سکتا ہے / سکتی ہے If very angry, might hit someone	F3	9.
					اکثر چیزوں سے اتنا لطف اندوز نہیں ہوتا جتنے کے اس کے دوست ہوتے نظر آتے ہیں Often does not seem to enjoy things as much as his/her friends	F2	10.
					دوسروں پر تنقید نہیں کرتا / کرتی	F3	11.

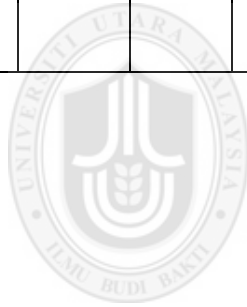
					Doesn't criticize others		
					کوئی تنقید کرے تو غصہ میں آجاتا ہے / جاتی ہے Gets very irritate when someone criticizes him/her	F1	12.
					عام لوگوں کے مقابلے میں زیادہ اداس رہتا ہے Is sad more often than other people realize	F2	13.
					جو لوگ پسند نہ ہوں ان سے بد تمیزی سے بات کرنے میں گریز نہیں کرتا / کرتی Tends to be rude to people he/she doesn't like	F3	14.
					اسکول کے کام میں کوئی غلطی ہو جائے تو بہت مایوس ہو جاتا ہے / جاتی ہے Gets very frustrated when he/she makes a mistake in his/her school work	F1	15.
					کبھی چھوٹی سی بات پر بھی آنکھوں میں آنسو آ جاتے ہیں Feels like crying over very little on some days	F2	16.
					من پسند جگہ پر نہ لے کر جایا جائے تو غصہ ہو جاتا ہے / جاتی ہے Gets irritated when not taken someplace he/she wants to go	F1	17.
					غصہ کا اظہار ایسے الفاظ میں کرتا ہے / کرتی ہے جس سے دوسرے انسان کو تکلیف ہو When angry at someone, says thing he/she knows will hurt that person's feeling	F3	18.

EXTERNALIZING BEHAVIORS. (Self Report)

ذیل میں چند مسائل کا ذکر ہے جو عام طور پر اسکول کے بچوں کو درپیش ہوتے ہیں۔ مندرجہ ذیل جملوں کو غور سے پڑھیے اور بتائیں کہ یہ آپ کے لئے کس حد تک پریشانی کا باعث ہیں۔ یہ بتانے کے لئے "کبھی نہیں، بہت کم، بعض اوقات، اکثر" میں سے کسی ایک پر نشان لگائیں۔

ہمیشہ	بہت زیادہ	ایک حد تک	بہت کم	بالکل نہیں			
					اپنے احساسات کو خود تک محدود رکھنے پر ترجیح دیتا ہوں / دیتی ہوں I prefer to keep my feelings to myself.	F2	1.
					میں اپنے احساسات کے بارے میں بات کرنا پسند نہیں کرتا / کرتی I do not like to talk about how I feel.	F2	2.
					جب کچھ برا ہوتا ہے تو مجھے خود پر قابو نہیں رہتا When something bad happens, I feel like exploding	F1	3.
					دوسروں کو تکلیف دینے کے ڈر سے اپنے احساسات کا اظہار نہیں کرتا / کرتی I don't show how I really feel in order not to hurt others' feelings.	F2	4.
					میرے لئے اپنے کچھ احساسات سمجھ سے باہر ہوتے ہیں I have feelings that I can't figure out.	F1	5.
					اکثر لوگوں سے بات نہیں کرتی جب تک وہ خود بات کرنے میں پہل نہ کریں I usually do not talk to people until they talk to me first	F2	6.
					پریشانی کا اظہار کرنے میں خوف محسوس کرتا ہوں / کرتی ہوں When I get upset, I am afraid to show it.	F2	7.
					اپنی پریشانی کے بارے میں بات کرتے ہوئے مشکل پیش آتی ہے When I feel upset, I do not know how to talk about it	F1	8.
					اکثر سمجھ نہیں آتا کہ میں کیسا محسوس کر رہا ہوں / رہی ہوں I often do not know how I am feeling.	F1	9.
					لوگ مجھے اپنے احساسات کے بارے میں کثرت سے بات کرنے کی ہدایت کرتے ہیں People tell me I should talk about my feelings more often.	F1	10.
					کبھی کبھی اپنے احساسات کا اظہار کرنے کے لئے الفاظ نہیں ملتے F1	F1	11.

					Sometimes I just don't have words to describe how I feel.		
					جب ادا اس ہوں تو دوسروں سے چھپانے کی کوشش کرتا ہوں / کرتی ہوں When I'm sad, I try not to show it.	F2	12.
					لوگوں کو اکثر دوسرے کے خیالات کا سچا اظہار پسند نہیں آتا Other people don't like it when you show how you really feel.	F2	13.
					یہ جانتے ہوئے بھی کہ اس میں بہتری ہے، اپنے جذبات کا اظہار کرنا مشکل لگتا ہے I know I should show my feelings, but it is too hard.	F2	14.
					اکثر اپنے غصہ کی وجہ سمجھ نہیں آتی I often do not know why I am angry	F1	15.
					کسی کے بارے میں اپنے احساسات کا اظہار کرنے میں مشکل پیش آتی ہے It is hard for me to show how I feel about somebody.	F2	16.



UUM
Universiti Utara Malaysia